A Course of Lectures
ON THE
STRUCTURE AND DEVELOPMENT
OF THE
VERTEBRATE SKELETON.

Recently delivered at the Royal College of Surgeons of England

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LECTURE X.

(*Concluded from page* 122.)

THE next most remarkable skull amongst the mammalia, although it is not a skull which presents anything like the proportions of the monotreme skull, is that of the marsupials. I do not mean now to say that the characteristics I am about to point out are absolutely universal amongst marsupials, but the fact that they occur in some of them is sufficient for me to indicate them as remarkable peculiarities of marsupials. The form of the cranial cavity is quite different from that in the monotremes. For example, this is a section of the skull of the thylacine. You may observe, in the first place, that the whole cranial cavity is divided into three very marked chambers: the front chamber, which lodges the olfactory enlargement; a chamber which lodges in its upper part the cerebral hemispheres; and a chamber which lodges the cerebellum—a sort of reptilian division into three principal chambers, corresponding with the principal elements of the brain. And you will note how very small is the proportion of the cerebral length—that measurement which I spoke of in briefly characterizing the variations of the human skull; how very short the cerebral length is to the length of the basi-cranial axis—hardly more than half as much. All these are features which express the low organization of the marsupials, and their affinity to the lower groups of vertebrata. There is another very curious feature about many marsupials, excellently pointed out by Professor Owen, in his work on "The Osteology of the Marsupial Skull,"—that the ali-sphenoid enters largely into the composition of the tympanum—a very singular character. In ourselves it might be said almost to enter to a very minute extent, because the ali-sphenoid sometimes extends by a prolongation backward into the roof of the Eustachian tube; but that is a mere insignificant, minute, fractional share, as compared with that which takes place in many marsupials, where the front part of the osseous bulla is almost entirely made up of expansions containing the great chamber of the ali-sphenoid itself. The other great and singular peculiarity of the marsupial skull is the inflection of the angle of the lower jaw, which, instead of passing backwards in a straight line, as in the case of the sheep, sends a great process inwards, the precise function of which, unless it is to give attachment to the pteryguid muscles, does not seem to be well understood; but it is a process which is almost universally characteristic of marsupials. So that, finding this internal prolongation in a fossil bone, for example, you will have exceedingly good reason for believing—in fact you might almost conclude with certainty—that the animal to which it belonged was a marsupial animal: one of the most curious cases of empirical correlation I know, because no one is able to explain the reason of this peculiarity; but it is one of those empirical laws of correlation which are of so much value in determining the nature of fossils, as has been often pointed out. Again, in many marsupials there is a very interesting and peculiar reptilian feature—the mode in which the internal carotids enter the skull. They do not come through the foramen lacerum or other parts of the temporal bone, as in man, but through the sides of the basi-sphenoids, and make their appearance in the bottom of the sella turcica, as they do in the crocodile. It would be one of the most interesting subjects I know to work out this point, to see whether the two ossifications of which I spoke in describing the human skull as the lingula sphenoidales—whether it might not be that these in the marsupials, extending downwards and inwards, being formed at first in connexion with the carotids themselves, unite at the base of the skull, as in oviparous vertebrata, and then include the carotids. That seems an extremely possible explanation of this apparent anomaly. In that case it would be remarkably interesting as going together with many low features which present themselves in the marsupian skull.

The edentate skull might present us with a great many interesting features if there were time to take them into account, but it will be well, perhaps, if I pass on now simply to speak of those skulls which present anomalies and peculiarities requiring some sort of notice or explanation. Some of the most remarkable skulls are those which are presented by the sirenia, dugongs, and their allies, which were at one time classed amongst the cetacea under the name of herbivorous cetacea, which are entirely different and separate animals from the true cetacea, differing from them in their essential peculiarities and their organization. These animals agree with the ungulate mammalia, with the horse, the tapir, the deer, and the elephant, in the considerable proportionate size of the cerebral chamber, but differ in the circumstance that it lies altogether in front of that for the cerebellum; there is nothing like an overlap, nothing like an extension backwards of the cerebrum over the cerebellum. And what I called the tentorial angle in man is in them not very much more than a right angle,—it may be somewhat more or somewhat less,—at any rate it is always, comparatively speaking, a small angle. Again, in the skull of the dugong, as in that of the marsupials, to which it is most closely allied, the ethmoidal plane forms a comparatively small angle with the plane of the basi cranial axis: all these being characteristic of lowness of organization. But that which gives the dugong's skull its greatest peculiarity is the small size of the frontal bones, and the manner in which the anterior nares are apparently thrown up to the top of the skull, this being produced in a great measure by the remarkable change which takes place in the form of the jaws, in consequence of the development of the pre-maxilla. You observe that the pre-maxillæ, which contain the tusks of the dugong, are perfectly immense and prolonged downward, and they give the singular physiognomy to the skull in a great measure. The nasal bones, on the other hand, are comparatively reduced, so that the anterior nasal apertures—which, if the nasal bones were well developed, would extend downwards and terminate at the extremity of the snout—are, in consequence of this peculiarity in the skull, apparently placed at the top of the head, but in the recent state covered by muscle; and the nostrils are in their ordinary place. In these aquatic mammals the body of the ethmoid is exceedingly strong and bony; the exits of the olfactory nerves are comparatively small and insignificant. At the same time, you know, there is a certain looseness in the elements of the capsule of the organ of hearing, which is very easily detached from the sides of the skull, in the same way as in most mammalia. The skull of the ungulate vertebrates in general—that is, of ruminants and tapirs, the rhinoceros and horse—presents essentially the same features as those of the dugong. There is always a sort of cylindrical cranial cavity, with a low tentorial angle and a low ethmoidal angle; the cerebellum is lodged in a fossa, and in a large measure falls behind that of the cerebrum. But in some ruminants, as the ox, there is a very curious and interesting modification of the character of the skull, which is quite peculiar—not usual amongst ruminants as a whole, but in many ways very interesting. The frontal bones in the ox are immensely enlarged; they extend far backwards—as may be seen in a young calf's skull—so as actually to cover over and, as it were, throw the parietals to the back part of the skull; so that in the adult ox the upper face and the under face of the skull present a somewhat acute angle. The whole of the upper region is formed by the frontals, and the whole of the occipital is formed by a very small portion of the parietals, and to a large extent by the squama occipitis, the upper part of the occiput. Then, as frequently happens, and in a remarkable degree in the elephant, the two tables of the frontal bone become immensely separated, and the frontal sinuses extend back into them until the whole upper face of the skull is filled with these cancellated cavities.

Furthermore, in the ox's skull the frontal bones are largely produced over the orbits into a posterior and an anterior process; and in consequence of the manner in which the parietal bone is thrown backwards (if I may so say), a portion of it only appears in the temporal fossa itself, underneath or behind the hinder process of the frontal. You must leave out of consideration the horns, as being mere outgrowths of the skull.

I enlarge upon these peculiarities of the skull of the ox, because the peculiarities of the ruminant skull and those of the monotreme skull, taken together, are found to be combined in the cetacea in a very singular and strange sort of way with other characters of their own. In the cetacea—that is, the true carnivorous cetacea, the porpoise and the whale—in these animals, as in the delphinus, you may observe that the cranio-facial axis has become almost straight—as straight as in the echidna; whereas even in the thylacine and in the lowest marsupials there is a certain angle between the basi-cranial and facial axis, although it is excessively obtuse—nearly 180 degrees. If you take the horse or the dugong, or still better the ruminant of which I was speaking just now, you will find that the cranio-facial angle is exceedingly marked; it is considerably more than 90 degrees. But in the cetacea you find a straightening, as it were, of the basis cranii, so that the cranio-facial axis, as I was saying, is nearly one straight line. Then the ethmoid plane forms almost less than a right angle; and the plane of the basi-cranial axis and the occipital plane form nearly a right angle. The tentorial plane, on the other hand, instead of in any way coinciding with or following this, is very considerably inclined; and, what is more, the vertical height of the cranium is quite as remarkable as it is in the monotreme: so that, notwithstanding these features of low organization, which we find in the straightness of the cranio-facial axis, the mass of the brain of the cetacea is exceedingly large—indeed remarkably so. Then, just as in the ox, and in the ruminants generally, you find that in the cetacea the frontal bone extends backwards to the top of the ridge of the skull, and that it is there met by the supra-occipital, so that the parietals are quite obscured and pushed away as it were, and appear chiefly in the lateral temporal fossa. It is a most singular thing to find this coincidence of organization (in both cases an exceedingly remarkable and anomalous one) between the cetaceans and ruminants; so that exactly in those respects in which the ox—I speak more particularly of that—differs from the dugong, the horse, and so on, so it agrees with the cetacea proper.

Still more remarkable are the bones of the face of the cetacea. In the true whales they are symmetrical. There are two nasal bones well developed in the middle line, and two pre-maxillæ, which are exceedingly small in their palatine portion, but which have extremely long ascending processes, just as in the case of many ruminants. On the other hand, the maxillary bones are exceedingly large, and form almost the whole margin of the face, extending upwards to the surface of the frontal and in a large measure obscuring it. Then the frontal bones themselves are almost completely covered by the extension upwards of the squama of the occiput, so that the principal part of the occiput completely pushes asunder and hides the parietals, which run down into the lateral fossa of the skull. Then there are very large anterior prolongations of the frontal bones, corresponding to the orbital prolongation which I was pointing out just now in the ox. In the true whales the bones of the skull are symmetrical; but in the dolphin and the narwhal and all their allies there is a greater or less asymmetry, which is quite as curious in its way as the asymmetry of the flat fishes. You may observe, looking at the narwhal's skull, that not only is the skull asymmetrical in consequence of the size of the socket for the great tusk, while there is no corresponding tusk on the other side, or only a very small one, but the asymmetry of the skull is not caused by that alone; it extends throughout the whole of the roof of the skull, so that while the middle line between the pre-maxillary bones runs pretty well straight, one pre-maxillary bone is rather larger than the other. That is a slight difference; but when you come to the nasal apertures, the vomer is pushed to the left side, and at the same time the parts of the maxillary bone and the pre-maxilla adjacent to it are also pushed over to one side, and from that point the line of the skull is oblique, and the two nasal bones (which are quite rudimentary) are then thrown over to one side. The push to one side extends completely to the back of the skull, so that the central point of meeting of the supra-occipital and of the frontals is thrust quite over to the left side of the skull, just as if, when the skull had been quite soft, you had taken the top of it by the knob and thrust it well over to one side—as if some kind of artificial compression had been used. That of course is a distinct characteristic of the human race; none of the lower animals make use of processes of that kind.

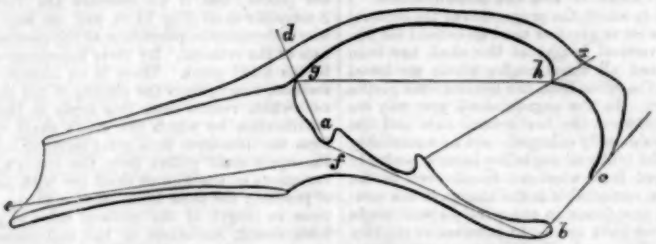
Although we should find a great many matters of detail interesting to us in the skulls of other mammals standing intermediately between the lower forms and man, yet the details are such as I should not be justified in entering into now; and I will therefore ask you merely to follow me in speaking of those modifications which are found in that great series of primates, and extending from the lemurs to man himself. They are quite readily traceable, if we take three skulls,—three will do as well as thirty for this purpose,—the skull of the lemur (Fig. 68), the skull of a cynocephalus (Fig. 69), the skull of a gorilla (Fig. 70), and then the human skull, the skull of a negro (Fig. 71, n), for example. Taking the skull of the lemur to begin with, you find that the basi-cranial axis (Fig. 68, *a b*) from the extremity of the pre-sphenoid to the hinder extremity of the basi-occipital (which, as you may see, is evidently the true axis of the skull), in proportion to the cerebral length (*g h*), is rather shorter than it is in the beaver (Fig. 67); that is, the cerebral length is longer, but at the same time the cerebral length does not by any means equal the basi-cranial length, but falls somewhat short of it. Furthermore, you find that the occipital plane (*b c*), instead of forming a right angle as in the beaver, forms an obtuse angle with the basi-cranial plane; that the tentorial plane (T) is in the same case, having a more obtuse angle than in the case of the beaver; and that the ethmoidal plane (*a d*) is in the same case: it is, as I have said, as if, in consequence of the greater development of the cerebral hemisphere, the anterior plane had been thrown forwards and downwards and the anterior backwards and downwards. Furthermore, you will perceive that the cranio-facial line (*b, e*) no longer forms the immensely obtuse angle that it does in the beaver, an angle amounting I should suppose—I have not measured it—to at least 160 or 170 degrees; it is very nearly a straight line; we will say 160 degrees for safety. Here it is considerably less. You continue the basi-cranial line onwards, and you have about thirty-five degrees left between that straight line (*a b*) and the end of this (*a d*); so that in passing from the lower mammal and the lower vertebrate, even to such a form as the lemur, you find a gradual lengthening of the cerebral length as compared with the basi-cranial length, a gradual increase of the olfactory and of the tentorial and the occipital angles, and a gradual diminution of the cranio-facial angle.

Now, passing from the lemur to the baboon, what do we find? Fig. 69 shows a section of the skull of the baboon: *a b* is the basi-cranial length from the anterior extremity of the pre-sphenoid to the posterior extremity of the occipital, taken in exactly the same way as the lemur. Fig. 69 (*g h*) is the cerebral length, and you will at once see that the cerebral length is now, not a little short of the basi-cranial length, but somewhat in excess of it. Then you will observe a most remarkable alteration in the various planes of the skull. In the baboon the ethmoidal plane (*a d*) forms a much larger angle with the basi-cranial plane. The tentorial plane (T) forms an enormously larger angle, and the occipital plane (*b c*) forms a considerably larger angle. At the same time, notwithstanding the great elongation in the baboon, the cranio-facial angle is decidedly smaller than in the lemur.

Pass from the baboon to the gorilla (Fig. 70),—perhaps that would form the best step,—and you find—what? That if you take the basi-cranial length (*a b*) in just the same way, and then measure it as against the cerebral length (*g h*), the cerebral length has now become still greater in proportion to the basi-cranial length. It exceeds that of the baboon far more than that of the baboon exceeds the lemur. At the same time the cerebral height has become far larger in proportion; and if you take in a rough sort of way the angle which would be formed as between the basi-cranial axis (*a b*) and the facial axis (*e f*), that angle has become very much less, and at the same time the ethmoidal plane (*a d*) has now become, in comparison to the axis, a very much larger angle. If you take the axis perpendicular to the basi-cranial axis, you will see it has a vastly larger bend forwards and downwards than it has in the case of the baboon. At the same time, if you take the tentorial plane (T) from the posterior extremity of the sella turcica to the insertion of the tentorium, you will see at once that the increase of the angle is most remarkable; in fact, in this respect, the gorilla's cranium affords you a complete transition to the cranium of the man.

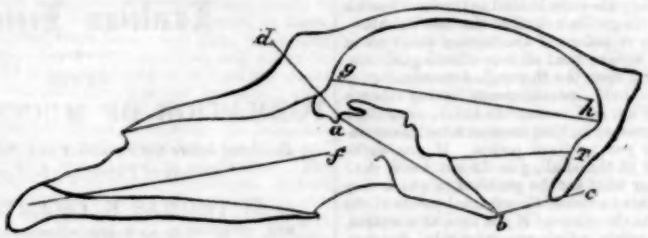
What has happened in the man's cranium? If you take the same measurement as to length from the extremity of the occipital to the anterior extremity of the pre-sphenoid (*a b*), you find,—and it is perhaps the most remarkable difference between the gorilla's skull and the man's,—not that it is a question of

FIG. 68.



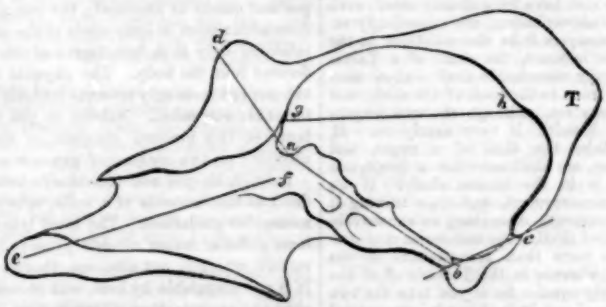
Section of lemur's skull, showing axes, planes, and angles. *a*, *b*, Basi-cranial axis. *b*, *c*, Occipital plane. *a*, *d*, Ethmoidal plane. *b*, Basi-occipital. Left of *a*, Ethmoid. *d*, Frontal. In front of *d*, Nasal. *e*, *f*, Basi-facial axis. *g*, *h*, Greatest cerebral length. *f*, Pre-sphenoid.

FIG. 69.



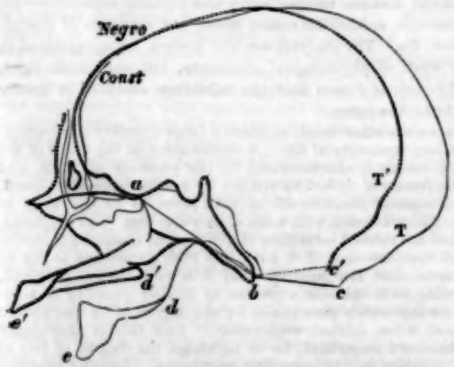
Section of baboon's skull, showing axes, planes, and angles. *a*, *b*, Basi-cranial axis. *b*, *c*, Occipital plane. *a*, *d*, Ethmoidal plane. *b*, Basi-occipital. Left of *a*, Ethmoid. *d*, Frontal. In front of *d*, Nasal. *e*, *f*, Basi-facial axis. *g*, *h*, Greatest cerebral length. *f*, Pre-sphenoid.

FIG. 70.



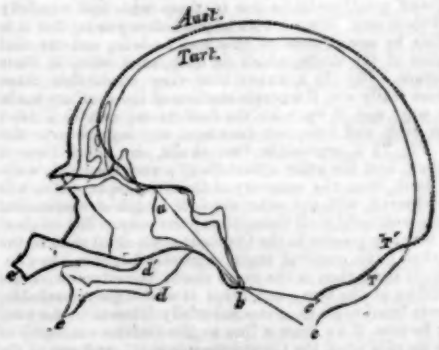
Section of gorilla's skull, showing axes, planes, and angles. *a*, *b*, Basi-cranial axis. *b*, *c*, Occipital plane. *a*, *d*, Ethmoidal plane. *b*, Basi-occipital. Left of *a*, Ethmoid. *d*, Frontal. In front of *d*, Nasal. *e*, *f*, Basi-facial axis. *g*, *h*, Greatest cerebral length. *f*, Pre-sphenoid. (The line *g h* is much too high behind, at *h*, and does not give the full cerebral length.)

FIG. 71 A.



Section of Negro's skull (dark lines), and of Constantinople skull (faint lines).

FIG. 71 B.



Section of Australian skull (dark lines), and of Tartar's skull (faint lines).

one-and-a-half, but that it is a question of two-and-a quarter, or from that to two-and a-half or two-and-three-quarters. I know of no human skull in which the proportion of the cerebral length is anything like twice as great as the basi-cranial length. At the same time the vertical height of the skull has been considerably enlarged, and all those angles which we found gradually increasing in the series from the lemur to the gorilla have become still larger. In the negro's skull you may see that the angle formed between the basi-cranial axis and the ethmoidal one is now considerably enlarged—not so remarkably as some others. Then the tentorial angle has become perfectly immense—vastly enlarged from what we found even in the higher apes. Still more remarkable is the change in the occipital angle (*a b c*); that now forms an excessively obtuse angle with the basis cranii; you have merely to increase it slightly to make it one straight line: and all this, you perceive, goes *pari passu* with the prodigious increase in the size of the cerebral cavity as compared with its size in these animals. But what I want to point out to you particularly is, that all these constitute one series of changes, and whatever the nature of the change from the lemur to the higher ape, whether greater or less in degree, it is precisely the same in kind as the modification which takes place from the gorilla's skull to the man's skull.

Nor is this all, but the variations of the human skull are of the same nature; for I believe that all our ethnological considerations rest essentially upon the thorough determination of the measurements of the skull—measurements having relation to a fixed standard. Why, as I venture to think, craniology has come to so little at present is, that mere external measurements of the skull give you no fixed points. If you make drawings of the exterior of the skull, you do not know until you put one over the other what are the positions in which they correspond, simply because no one of the external points of the skull is fixed relatively to the others. If you look at a section, you will see that the points which are relatively, developmentally, and structurally fixed, are the two ends of the basi-cranial axis (*a b*). It is those which are formed first; it is those upon which all the rest are modeled; it is those which exist before the others are ossified; and they are therefore relatively fixed points. So that I think there is no doubt that the differences between skulls which have been already noted, such as brachycephalism and dolichocephalism, are exceedingly remarkable. To take two examples from the collection in the Museum. If you take, for instance, the skull of a Tartar (Fig. 71 B, *faint lines*)—a very remarkable skull—when measured by callipers from the front to the back of the skull, and then the other way, you may see, although the two lengths are not quite equal, the breadth is very nearly so. If, on the other hand, we take the skull of a negro, and measure it in the same way, we shall see what a prodigious range of variations there is in the human skull! If we take the antero-posterior measurement, and then turning it aside, take the other measurement,—this being an excessively dolichocephalic or long-headed skull,—the transverse measurement will not be perhaps more than seven-tenths of the longitudinal measurement; whereas in the Tartar's skull the two measurements are nearly equal. So if you take the two skulls under another aspect—if you look at one in a horizontal position, and take the other in the same way, you will find that in the one (Fig. 71 A, *dark lines*) the jaws are ape-like, projecting and extending far beyond the limits of the front of the cranium; whereas in the Tartar the line of the face is almost vertical: this being an orthognathous skull, and the other a prognathous skull. No doubt these are very important differences, and great credit is due to those who first carefully pointed them out. What I wish to put before you is, that it is impossible by comparisons of this sort to bring out the real differences of the skulls, which lie deep, as it were, in their architecture. Fig. 71 A shows how very remarkable these differences really are, if accurate sections of the skull are made in this way, and if we take the basi-cranial axis as a fixed point in each, and trace our drawings, and lay one over the other. Fig. 71 A represents two skulls, one (*dark lines*) a negro skull, and the other (*faint lines*) a very beautiful, well-formed skull from the cemetery of Constantinople. You will at once observe, with the same absolute length of basi-cranial axis, how wonderfully all these other parts vary. The cerebral length is vastly greater in the Constantinople skull than in the negro skull; the occipital angle is greatly larger in the Constantinople skull than in the negro skull; the ethmoidal angle again differs in the two; and, what is still more remarkable, the cranio facial angle (*b, c*) is wonderfully different in the two, as may be seen if we draw a line to the anterior extremity of the pre-maxilla (*c*) of the Constantinople skull, and one to the anterior extremity of the negro's skull (*c'*). The same things are pointed out if we compare the Tartar's skull with the Australian skull (Fig. 71 B), and we may observe in the same way differences in proportion of the cerebral length to the basal axis of the cranium. By these measurements we are certain as to the fixed point. There is no chance of deception in this method, arising from the placing of the skulls, and the conclusion which results from this study is, that not only does that modification by which the man's skull differs from the ape's form the last term in a great series of modifications by which the ape's skull differs from the lemur's skull, but that the variations of the human skull one with another are variations of precisely the same kind—that is to say, that they are variations in length of the cerebral mass as proportionate to the basis cranii, variations in the inclinations of the ethmoidal plane, variations in the inclination of the tentorial plane; and that whatever difference lies at the bottom of one series of modifications would appear under these circumstances to underlie the other.

Lumleian Lectures.

ON THE

FORMATION OF MUCUS AND PUS.

Delivered before the President and Fellows of the Royal College of Physicians in Lent, 1863,

BY THOMAS K. CHAMBERS, M.D.,

HON. PHYSICIAN TO H.R.H. THE PRINCE OF WALES, PHYSICIAN TO ST. MARY'S AND THE LOCK HOSPITALS, ETC.

LECTURE III.

IN the vitalized forms which they present, we may consider pus and mucus as identical; the pus-globule being merely the descendant more or less remote of the mucus-globule, and both retaining only that low degree of life which they originally derived from the body. The physical differences between the two depend seemingly upon the medium in which these vitalized forms are suspended. Neither in pus nor mucus are the contents of this medium constant in their proportion to one another; no two analyses of pus or mucus are ever the same.

Indubitable pus and indubitable mucus may be clearly defined as the two ends of a scale, between which there are innumerable gradations. The most transparent, stringiest, and least globular mucus consists principally of a peculiar animal matter, which is not albumen, though it closely resembles it. It is not coagulable by heat, and it contains more oxygen on ultimate analysis than albumen does. Sulphur also appears not to be one of its constituents. Until it can be found reducible to be considered a compound of some known intermediate substances, it is temporarily called "mucin." This word simply means mucus divested of those contents which are capable of another nomenclature and physical separation—as, for instance, epithelium-scales, blood, the ammonia of decomposition, &c. The analyses are well known, being reprinted in every work of physiological chemistry, but shed little light, for the obvious reason that the substance analyzed is hardly ever twice the same.

Pus, on the other hand, contains a large quantity of albumen, and a large quantity of fat. A modification in the mode of the loss of health is characterized by the presence of fibrin, and certain forms of defective vitality by casein being also found. The inorganic constituents of both seem to be the same as those of blood-serum with some of its water lost. Our diagnosis, then, of the morbid secretions of the mucous membranes should be not absolute—not that such and such a specimen *is* pus or *is* mucus—but comparative, that it is *more or less* purulent, according as it exhibits a greater or smaller quantity of albumen; a fact easily ascertained by the degree of its coagulation by heat when diluted with water. And this is thoroughly practical and important, for it indicates the degree of loss of local vitality in the secreting membrane. Equally practical

also and important is the observation of the presence of fibrin and its amount. In large and overwhelming quantities we are familiar with it as occurring in the most serious deficiency of life consistent with life at all which we find in mucous membranes; and there appears even in minor cases a close connexion between its amount and the degree of deficient vitality or inflammation. During a severe cold in the head minute clots of spontaneously coagulating fibrin may be found in the secretion of the Schneiderian membrane, which, existing in large quantities, form the false membranes indicative of the serious poisoning of the system in diphtheria and croup.

The phenomena we see on the mucous membranes are a question of degree rather than of essential difference.

Loss of vitality, as shown in mucous membranes, seems to be exhibited in the following degrees:—

First there is an *arrest of function*. For example, from the impression of cold the Schneiderian membrane is temporarily deprived of its endosmotic force; it ceases to absorb the water which is condensed on its surface from the breath, and that water drips from the nostrils. Or the stomach or intestines, from mental or physical causes, are deprived of their power of absorbing and digesting the fluid matters presented to them, and partially first excreted from them; and these fluids may pass away by diarrhœa. Or the skin is chilled, and shows its deficient vitality chiefly in the deficiency of its most prominent function; though it feels painfully, it cannot feel so delicately as it ought. In a vigorous person full life is soon regained: the nose recovers its natural degree of dryness; the intestines absorb again before the fluids have passed from the body, and the temporary indigestion does not arrive at diarrhœa; the skin recovers its feeling after a temporary painfulness. But we know that our invalid patients, whose vitality is low, are not so easily reinstated. Catarrh of various parts quickly and readily follows the action of physical agents. It is probable that in this least degree of injury the capillaries are contracted in area, and consequently the rapidity of their stream increased, by the action of the nerves. This phenomenon is wanting if the injury is greater; in experiments upon animals the microscope does not detect it, if the reagent applied is powerful.

2. A greater degree of injury is accompanied by a loss of elasticity in the capillaries. Their dilatation, and the consequent retention and stagnation of the blood in them, is familiar to us all, in both the living and dead subject, as "*inflammatory congestion.*"

3. This stagnation may be in isolated spots complete; the blood-discs adhere together in rolls, as when removed from the body, and block up the passage. Thus the arterial wave is obstructed in its course, and like an ocean-swell shattered against a shore of rocks, becomes more evident to the senses as the well-known "*throbbing.*" It is shortened and sharpened, but there is no evidence that it is strengthened; indeed, the analogy I have cited, and the general fact of weakness being accompanied by quickened pulse, would seem to show that it is diminished in propelling force.

In the mean time there is an accumulation of that constituent of the blood which most resembles in appearance the element of young growing tissue—the colourless blood-corpuscles. The blood is dark, indeed, to the naked eye, but under the microscope is seen to be made dark by being filled with these pale bodies, possessing a high refractive power.

The loss of elasticity in the coats of the capillaries renders them more easily permeable by the contained fluid. Serum is poured out into the neighbouring parenchyma, and joins with the swollen capillaries in producing "*swelling.*" The loss of vitality in the blood-discs may be so complete that their hæmatin is dissolved in the serum, and we get the surrounding parts stained with it—as for a short time in typhus fever, and for a long time in syphilitic eruptions. Or the blood-vessels may completely lose their cohesion and be ruptured, allowing of hæmorrhage. But in all this there is no new process, nothing which is not a direct deficiency of function.

In solid structures this effusion is followed by an endosmotic current of the watery part back again into the circulation, leaving behind it the more solid and coagulable constituents. On free surfaces, covered only by soft open epithelium, the water and salts therein dissolved escape, forming the fluid of the mucus. The elements of new tissue, being there very copious to supply the constant demand for growth, ooze out copiously with the serum, and constitute the mucous globules. They are wasted elements of new growth, not themselves a new creation, or evidences of superadded life.

How do these matters get through the coats of the capillaries? There cannot be holes for their escape, or the blood-discs, which are the smaller of the two, would always escape also. Doubtless this is one of the great riddles of physiology. But I think the art of drawing is in a certain degree responsible for some of the difficulty which it presents to our minds. When we have no means of correcting by our other senses impressions made on the eye, we are too apt to consider everything with an outline as equally solid. The necessarily hard outlines of the engraver express to us forms which may, for all we know, be spheres of cast iron, whereas in truth they are as delicate as aërial clouds. Why may they not pass through tissues, mutually dissolving and dissolved by the materials of those tissues? Just as we see a stratum of fleecy cloud among mountains, or in Turner's pictures, disappear when it comes to a stratum of warm air, and reappear in the same form when it emerges on the other side. To get just ideas of nature, we must look upon solidity as a comparative, not as an absolute, quality.

4. In a higher degree of deficient vitality the serum contains albumen and fat also exuded with it; and this mixed with the multiplied globules constitutes the fluid we call "pus." The albumen and fat not only escape on free surfaces, but saturate also the tissues they escape through, making them more retentive of water than would otherwise be the case. Inflamed cuticle takes a much longer period to dry than normal cuticle. Langhans found that a piece of healthy rabbit-skin was dry in three hours, but a piece of the same skin which had been inflamed during life took twenty hours to part with its moisture to the same extent.* Thus it appears to be saturated with the nutriment which it has lost the power of employing aright.

5. Pus formed as I have described is a soft, greasy liniment, which tends probably to shield the parts with which it lies in contact from foreign influences, which in their condition of lowered vitality would be noxious to them. It is more bland and less liable to decomposition than any artificial application. Kept on the healthy skin it causes less irritation than even water. But under certain circumstances it becomes what we term *ichorous*. In this state it is corrosive, poisonous, and destructive to the neighbouring tissues. Now, this cannot arise simply by the chemical decomposition of the pus itself in consequence of retention, because in a good many cases (as in cancrum oris, for example,) it has not been retained so long as usual, but is thrown off ichorous and irritating as it is formed. But you may observe that in all these instances of ichorous pus there is necrosis, mortification, ulceration, or some other form of actual loss of tissue. Tissue may be forming as in granulations, but it is being destroyed at the same time with abnormal rapidity. I cannot but think therefore that the ichorous nature of such pus may be due to its saturation with the organic acids which are the results of the decomposition, not of the pus itself, but of the melting tissues. Wash away this irritating pus, clean the sore, and that which is then formed often is quite bland and benignant. As pus differs from mucus, so ichor differs from pus in the nature of its accidental fluid constituents.

The formation of ichorous pus exhibits a further stage of loss of vitality. The poisonous part of it seems to be peculiarly soluble, and capable of uniting with, and destroying, animal tissues. Absorbed into the blood, it naturally destroys the vitality of the constituents of that fluid, causes it to coagulate in localized spots, and thus to give rise to the congestions and abscesses of pyæmia. When we reflect how easily ulcerations may arise in mucous membranes, and what an active surface they offer for absorption, we cannot be surprised at the frequency with which pyæmic abscesses follow slight injuries, such as operations on the bladder, crushing of calculi, typhous inflammation of the bowels—cases which seem of minor moment, but which certainly involve solutions of continuity, with consequent decomposition of tissue and the formation of ichor, in a situation very open to absorption.

6. The formation of fibrinous coats on mucous membranes I have already shown not necessarily to involve destruction of the epithelium. Is the loss of vitality which causes it to exosmose through the capillaries in the fibrin itself or in the walls of those vessels? Whichever it may be, such an exudation certainly is evidence of a great deficiency of life; and, moreover, by the mechanical impediment it throws in the way of the functions, usually leads to further deficiency.

These facts, so familiar to us all in our daily work, viewed thus in connexion with one another, cannot fail to impress us with the feeling that the apparent activity of mucous membranes in diseases is in truth a descending scale of loss of vitality. And this feeling must, I think, have great weight in our therapeutical dealings with those diseases; indeed, I can-

* Zeitschrift für Rat. Med., R. iii., Bd. xii., Heft 2.

not imagine anything of more practical importance to physicians and their patients.

The influence of physical agents on mucous membranes which are throwing off mucus or pus, or are disposed to do so, is very different from what it is during their health. A degree of cold, which is borne with ease by them when in full vigour, causes a further arrest in their functions, and heat is equally badly borne. The action of oxygen, as contained in atmospheric air, is to the healthy tegumentary tissues invigorating and beneficial; but when their vitality is lowered, exposure to it kills them still further, and may even alone prove fatal to the patient, as we see in the instance of extensive burns.

I was lately much struck with the noxious influence of atmospheric air on the pyogenic skin in a case of semi-confluent small-pox. At the period of the maturation of the pocks, when just preparing to begin drying up, they presented three grades, distinguishable by the following microscopic differences in their contents. In one sort the matter was of the consistence of thin lard, white and opaque. Examined under the microscope, it was seen to consist of epidermic scales, many of normal aspect, but some filled with granular matter hiding from view the central nucleus. In another sort the normal scales were few, the granular scales equalling them in number; but more numerous than either were pus-globules of various sizes, and of irregular shapes, as if budding on several sides. In a third sort, taken from the very confluent parts of the eruption, there was nothing to be seen in general but regularly formed pus-globules of even size, and a number of highly refractive globules (of fat) among them. The fully formed pus was so copious that it overpowered the *débris* of epidermis, which was rarely visible. These three classes of microscopic phenomena represented three grades of destruction which the skin had undergone from the effect of the variolous poison. In the first the epidermis was merely destroyed, and the materials for renewal were available for a new one. In the second to a slight degree, and in the third completely, these were converted into pus to a great depth. Consequently there was great risk of permanent destruction of the skin, or a scar. Now, I found that the grade of destruction bore a direct ratio to the exposure of the various parts to the air. The most favoured situations were the thighs, abdomen, and tongue, where the pocks of the first or least injurious kind were very numerous. Next came the legs and back, and then the hands and forearms. The face was the most purulently affected of all. With regard to the back, it maintained its comparative immunity in spite of the cuticle being much chafed by the movements of the sufferer. You will notice that the most affected situations are those which are most exposed to oxygen and evaporation, which are life to the healthy skin, but death to it when diseased.

On rational grounds, then, I think the practice of painting over the pocks in prominent and important situations with collodion, caoutchouc, or gutta percha may be fairly defended. In this way we do all we can to secure a local atmosphere of carbonic acid—the normal atmosphere of internal tissues,—and to prevent the loss of vitality in the covered parts. More than this, I think we should be led to consider whether we do not sometimes err in applying too rigidly the theory of the universal wholesomeness of fresh air. Fatal cases teach us that it is bad for inflamed skins; is it good for wounds? is it good for abscesses? is it good for inflamed lungs? As physicians we have most to do with the latter case; and I must say I find that few things contribute to the ease and recovery of my patients so much as limiting the supply of oxygen in the atmospheric air by saturating it with watery vapour. I refer here not only to pneumonia, but to all catarrhal affections of the breathing apparatus.

The stomach, again, is much benefited by carbonic acid. It naturally contains it, and some cases of deficient digestion appear to arise from its absence. Atmospheric air swallowed with the food, or by a pernicious habit, produces dyspepsia; and nothing benefits that dyspepsia so much as solutions of carbonic acid in water. Our soda water, potash water, and lithia water derive their main virtue from the fixed air they contain.

The only way in which carbonic acid is employed in surgery is under the form of yeast poultices, which certainly stay the progress of death in the skin quicker than most applications. Were I a surgeon, I should like to try the use of the gas in a purer form as a healing agent for wounds, operative or accidental.

Such an atmosphere of carbonic acid is to a certain extent secured to sore places by a layer of pus or mucus, which is saturated with that gas, and not very pervious to oxygen. It is a great defence against noxious agencies, and I think we are wrong to clear it away more than is necessary to comparative cleanliness and the patients' comfort. We know how much lighter gonorrhœa is in the female than in the male, and one reason appears to be that the secretion is not constantly washed off the mucous membrane by the passage of the urine. Dirty people seem hardly to notice the existence of these discharges from the mucous membrane—they come and go of their own accord without causing any illness; while, on the other hand, cleanly patients are martyrs to their minor virtue and to their sensitiveness, protracting and aggravating disease by constantly removing the defence which pus or mucus presents against oxygen and cold. Of course an exception must be made of cases where the pus is ichorous and poisonous in its quality, when the sooner it is removed the better for the patient.

On the principle of not too frequently cleansing away mucous secretions I should attribute greater advantages than we are in the habit of attributing to opiates and other sedatives in pulmonary affections, where there is a copious bronchial discharge. Their obvious and immediate effect is to ease the cough; and some medical men are in the habit of speaking of that alleviation as if it were merely a convenient mask to conceal the morbid process which went on uninterruptedly. This easing of the cough, doubtless, takes place through the pneumogastric nerve being rendered less sensitive to the presence of the abnormal secretion, and so allowing it to collect in larger quantity before it is expectorated. I cannot but think this collection in larger quantities before expectoration is beneficial as a defence and as a curative measure.

The idea which I have endeavoured to inculcate, that an increase in the quantity of living tissues is by no means an evidence of an increase of their life or of their powers of life—nay, further, that it is rather an evidence of deficient life, cannot but have an important bearing on both pathology and practical physic. It is not a question of words, but of deeds. If inflammation be an abnormal increase of the vital powers of the tissues affected, then we cannot do better than employ the many agents which have a direct power of weakening life, a power which Boerhaave and Van Swieten believed was the only one the art of medicine could give.* If inflammation be an increase of vital powers, we should value our bleeding, our blistering, and our evacuants in accordance with the degree in which they reduce the strength. If, on the other hand, the phenomena of inflammation indicate direct deficiency of vitality, not only in the general system, but in the part affected, then we must make the chief end to be kept in view in our treatment the retention and increase of vitality. And when we employ the means I have named, we must look upon their debilitating action as an ugly fault unfortunately joined to some other virtue which they possess, and must try to counteract the evil while we retain the good.

Take, for example, the remedy bloodletting. Experience shows it to be beneficial in certain cases, so let us use it by all means. But all its benefits can be rationally traced to its mechanical hydrostatic action—to the taking away of so much fluid pressure which the weakened part is unable to bear. Let us, then, so apply the remedy that these mechanical phenomena should have most play, by making it as local and as sudden as we can, and by using it with a reference to what we want it to do. And all its evils can be also rationally traced to its physiological action—to its detraction of so much material of tissue from the circulation. Let us, then, when we use it for its mechanical advantage, counteract its physiological disadvantages by replacing to the best of our ability these materials of tissue. Instead of designedly starving our patients when we bleed, let us feed them.

We may reckon in the same way with other remedies less directly destructive than bloodletting. We should value them, not in proportion to their special evacuant power, for which they severally are classified as purgatives, expectorants, sudorifics, &c., but in proportion to the renewed growth of healthy tissue which accompanies their action. For example, epsom salts and aloes are both purgatives; but take a case of anæmic intestinal costiveness, and we know well that the more epsom salts the patient is dosed with the worse she is, but that aloes will restore a healthy condition to the mucous membrane of the bowels, and gradually reinstate its powers. It is not in proportion to their purgative powers that purgatives are beneficial, and we can hardly therefore consider that it is because of these purgative powers that they are beneficial.

The action of cantharides upon the skin as a curative agent has been established by the common consent of many generations. Is it the blistering and destruction and drain of

* "All that art can do is to weaken life."—Van Swieten's Commentary on Boerhaave, vol. i., § 106.

organic matter set up by the epispastic which does the good, or is some other part of its action? Now in eczema and herpes, and in small-pox above all, we have an enormous amount of blistering and destruction of skin and drain of organic matter; but instead of distant inflammation being arrested by them, or distant generation of pus prevented, we often see it produced. In small-pox, the more pustules there are on the body the more likely the patient is to have bronchial catarrh and pneumonia. Burns bear a still closer resemblance to the morbid process set on foot by cantharides; but the greater the extent of burn the more risk there is of internal inflammation. Then remark the stage of their action when blisters do good: their benefits are experienced, not when the destruction of epidermis is at its height, not when there is most serum and mucus and pus evacuated, but as the healing begins. Observe, for instance, a case of water in the chest: the level of the pleuritic fluid does not decline most rapidly when the blister on the surface is filled with serum, but when it is drying up and healing. Is it not, then, the growth of new cuticle which restores our patient?

In reckoning the beneficial actions of blisters as evidence for the counter-irritant theory of therapeutics, we are apt to forget the cantharidin which is absorbed by the skin, and the direct action of which absorbed drug on the mucous membranes is to bring them to a more healthy state. It appears, when taken by the mouth, for instance, in chronic bronchitis, and sometimes in gonorrhœa, to be a direct stimulant of their vitality. Blisters may be beneficial in this way quite independent of their more eye-striking effect.

Perhaps the most powerful for good of all the agents added to the Pharmacopœia of late years is oil. During the internal use of oil pus-secreting membranes and tissues dry up and become healthy, and their heated, congested state is diminished. And the more readily assimilated is the form of oil, so much the more marked is this improvement. That is to say, that the more we saturate the system with a base of growth, with a material capable of being built up into new tissues, the less likely it is to throw off those tissues in a half-formed state. The easy digestibility of cod-liver oil, to my mind, more than accounts for its wonderful effects, and makes superfluous the chemist's aims to find iodine or any other drug as a constant constituent in it. The good we do by administering it is in direct proportion to the largeness of the supply of nutriment thus presented to the tissues, and bears no relation to any pathogenetic results.

In investigating the action of drugs, we are sometimes apt to look too far, and in our search for the mysterious to pass over the obvious. We are apt to bestow too little thought on the immediate action of these agents on the mucous membranes with which they come in contact. Quinine, for example, inasmuch as it passes through the blood so far as to reappear in the urine, doubtless influences most tissues of the body; but still nine patients out of ten receive the greater part of the benefit accruing from the use of quinine by means of the augmented appetite and digestion which results from its presence in the stomach, not in the blood. It seems probable that the improvement in the vitality of pus-secreting parts which accompanies a course of quinine is due to the greater quantity of nutriment which this useful drug causes the mucous tract of the intestines to absorb.

The influence of heat upon mucus is a suggestive fact. If allowed to get cold, the globules cease to develop the little life they have; but if kept at the temperature of the body, they continue to grow into pus in spite of the unnatural circumstances in which they are placed under the microscope. This seems to explain how hot fomentations and poultices "favour suppuration," as surgeons say, in boils and abscesses. It explains also why suppuration is usually more rapid in deeply-seated, well-covered parts than in exposed situations. But is it wise thus to "favour suppuration"? Yes, truly; for while we are aiding the vitality of the pus-forming material, we are also aiding the vitality of the surrounding tissue—we are enabling it to recover that perfect state in which it need no longer waste its nutriment by throwing it off in a semi-vitalized stage; while at the same time the pus formed is the most natural, the warmest, the softest, and the least injurious substance we can apply to a sore tissue.

The recognised benefit of moist warmth may, I think, suggest to us something more. When an animal submits to the periodical latency of the higher functions which takes place during sleep, it instinctively seeks the warmest berth it can find; it is instinctively careless about the supply of oxygen so that it can get heat. Beasts hide themselves in unventilated dens and burrows; man surrounds himself with blankets and curtains in a close bedroom, and not all the questionable arguments of ventilating philanthropists can persuade him to open his window at night. I suppose, Sir, that instinct is hereditary experience transmitted by generation from sire to son, and continuously increased through countless ages. It is not surprising, therefore, that its silent voice should beat out of the field the voice of argument, however loquacious. But I doubt if we physicians listen for it carefully enough. In that state of deficient vitality which constitutes disease, we are sadly apt to leave to accident the duty of cherishing the weak life by warmth. In every hospital I enter, the wards are a great deal too cold. Because their forefathers tried to keep the sick warm by unwise methods, the public in the present day zealously oppose the better means of healthy warmth which new inventions provide. Can we be surprised at rheumatic patients falling into pericarditis, at fever patients having pneumonia, when house-visitors, vigorous and well fed, walk in from the park, and, because the wards smell of mutton-broth and poultices, order the windows open without compunction? Such things are; but they might be prevented if physicians would first convince themselves, and then the public, that an atmosphere and a temperature which is agreeable and wholesome to the healthy need not be either agreeable or wholesome to the sick.

I have endeavoured, Sir, in these lectures to point out the practical bearings of what is a limited though an important part of the phenomena of life. It is not indeed even the whole of that pathological state which we conveniently call inflammation. But I think no harm is done by pressing to results deductions from even the most limited observations, so long as we remember that they are limited, and so long as we do not forcibly bend other observations into coincidence with them.

EXTRACTION OF A BOUGIE, TWELVE INCHES LONG, FROM THE BLADDER.

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THE extraction of foreign bodies from the male bladder has usually been by lithotomy, or by the ordinary incisions for that operation. Indeed, with the exception of extracting the stone, such operations are scarcely known in surgery. Bits of wood or bone, peas, beans, and bullets have formed the nuclei of stones, and have been extracted by lithotomy. Sometimes there has been a knowledge of the nature of the nucleus, at other times it has been discovered afterwards, and in most of such instances there has been an incrustation of stone. Instruments have been broken in the bladder, or wound, in lithotomy, and have been forthwith extracted with the stone. An old-experienced lithotomist, now dead, told me that he once broke three bistouries in a hard prostate in making his way into the bladder, and brought them away with the stone. In the earlier days of lithotrity in this country, the late Mr. Liston showed an operation to his class to explain how a bent and bulging lithotrite might be extracted. This plan was to file the instrument through at the orifice of the glans, so that the part in the urethra might be extracted through a wound in the perineum. This was proposed at a time when there was much fear of an instrument bending; but lithotritists seem scarcely to think of such things now, as their instruments are more trustworthy, and all such operations as those referred to have been based on the idea or necessity of cutting.

Small stones have been coaxed from the bladder by means of baths, anti-spasmodics, diluents, attitudes, and instruments; but when success has followed any of these plans, there has been probably as much luck as special skill, and all of them have frequently failed. Certain objects have occasionally been seized by direct design, and extracted through the urethra. Small stones have been sometimes dealt with in this way, and Sir Astley Cooper's name is specially associated with this practice. It has, however, been more talked of, written of, and referred to than actually put to the test; and the want of practical knowledge on the subject may be attributed partly to the

rarity of cases requiring such treatment, and partly to a deficiency of mechanical means for coping with cases of the kind, or even to apathy on the part of practitioners to any novelty which might set aside the imposing ordeal of cutting into the bladder and extracting the offending object.

The possibility of extracting foreign bodies from the bladder has not been altogether overlooked by modern surgeons and instrument makers; and in proof of this I may refer to a very ingenious yet simple piece of mechanism which was exhibited in 1851 by the celebrated Charrière of Paris, constructed for the purpose of withdrawing such an object as a bougie, or a portion thereof, from the bladder. The main feature of this instrument was that, having clutched the bougie, it could lay it parallel with itself so that both might be drawn from the viscus simultaneously. For a demonstration on a table this instrument looked perfect, but the difference between this and practice on the living body is duly appreciated by the practitioner; and I am not aware of any remarkable illustrations of the utility of this instrument.

Within the last fifteen years, since gutta percha came into use, I have heard of more mishaps in regard to bougies breaking than previously. This material as applied to use for catheters or bougies is treacherous in the extreme, being apt to break when least thought of. Several instances of the kind have come under my notice. In one, a severe case of stone in the bladder was the result. Lithotrity was resorted to, in ignorance of the presence of such a nucleus, and the end of the bougie was removed by means of the lithotrity scoop. Some time after treating this case, a gentleman was brought to me with a statement that some inches of a gutta-percha catheter had broken off in the bladder. With a small lithotrite I had the good fortune to seize this object about the middle, and bring it through the urethra doubled like a piece of string. The accident had happened only a few days before, and the patient was hardly aware of the distress and danger which he had escaped.

In my experience I have not met with any case so remarkable as the following:—S. H——, Esq., aged nineteen, had been in the habit of passing a bougie for himself. On the evening of the 12th March, 1863, he allowed this instrument, which was without a head, to slip wholly into the urethra. His attempts to get it out seemed only to push it further towards the bladder; and instead of seeking assistance, he, in despair, went off to bed, where he slept soundly all night. Next day he drove six miles in a gig, and then had a strong desire to pass water. Having done so, he was called again in half an hour; and from that time until the 18th of May his sufferings were extreme. His nights were much disturbed, and during the day the call to make water came about every ten minutes. The urine was high-coloured and loaded with mucus. The straining was so severe that his eyes became bloodshot; and from being a stout able-bodied young man, he had become much exhausted and considerably emaciated. I have rarely seen anyone in greater suffering from stone in the bladder.

My assistance being asked in this case, I felt doubt and hesitation on various points. The patient gave a confused account as to the size of the instrument, and whether it was a bougie or a catheter. All that he was sure of was that it was not metallic, but flexible; that it was not of great thickness, and that the whole instrument had passed in. Looking to the circumstance that when I was consulted the instrument had been in the bladder for two months, I imagined that it must now be so coated with stone, that it would be too thick to be extracted by the urethra, particularly if it were to be withdrawn double. I therefore could not say positively whether the patient could be relieved by extraction in this way, or by the serious process of cutting into the neck of the bladder. I considered it expedient to inform my young patient and his friends on these points; and having ample permission to do as I might think best, I resolved to make, at all events, a trial to extract the instrument through the urethra, and so avoid the dangerous alternative. The process of sounding had convinced me that already the instrument had become incrusted, and I felt assured that it was bent in various directions; for whenever the sound was passed, its point came into contact with the foreign body. My impression was that possibly I might seize the object about its middle; that it might double, and not prove too large for extraction; and as for the calcareous matter, I was in hopes that from its recent deposition it might not be so thick as to cause obstruction, or that it might drop from the object as it was passing outwards from the neck of the bladder.

On the 18th of May, 1863, chloroform having been administered, and all prepared for lithotomy, I introduced a small lithotrite scoop, about the size of No. 4 bougie, and speedily seized the object between its blades. On drawing both through the neck of the bladder, I felt obstruction, but not sufficient to induce me to desist. Having reached the opening in the triangular ligament, the instrument slipped; and finding some difficulty in again fixing the blades, I tried several others, such as are in use for the extraction of small stones from the urethra, but with no better success. I again used the first instrument, and fortunately soon got a firm hold. With gentle traction I gradually withdrew the instrument and what it held, and succeeded in drawing out an entire bougie, exactly twelve inches in length, and about No. 6 diameter. To my astonishment, I found that I had caught the bougie by one end, and, in consequence, had met with less obstruction from the narrowness of the passage than if I had seized it about the middle, and brought it out double. Indeed, looking to the size of the bougie, and the manner in which it was incrusted, I think it probable that it might have been impossible to withdraw it through a urethra of the size of that with which I was dealing. A few drops of blood followed the attempts to seize the bougie as its end rested in the urethra. The object came out in a straight line; but it immediately, when the strain ceased after its emergence from the orifice in the glans, became coiled or bent, as indicated in this sketch.

This is doubtless the shape of the bougie as it lay in the bladder, the spaces being wider or narrower in accordance with the quantity of the fluid present. The incrustation was sufficient to give a certain amount of rigidity to the bougie, but happily not enough to prevent it stretching to a straight line as it was withdrawn. Inquiries were afterwards made about the bone or ivory head usually fitted to such instruments, when the patient stated that there had not been one. By good chance this bougie, instead of being solid, as commonly made, was hollow like a catheter, and hence was more compressible.

Thus the ordeal of lithotomy was set aside. The frequent desire to pass urine ceased forthwith, that fluid speedily became clear and healthy, and in ten days the patient was able to move about as actively as ever, and to retain his urine as in perfect health.

In the course of my practice I have not met with a case similar to this in all respects. As regards extraction it may be deemed as difficult and dangerous to deal with a portion of one inch or three inches in length as with an entire bougie; but the rarity of the one case is greater than that of the other, and the extent of twelve inches of incrustation was more likely to be a positive obstruction than a less amount. Then, beyond a doubt, the length of the bougie, even when coiled in the bladder, was productive of far greater suffering to the patient; for, whatever the quantity of water present, the bladder would always lie in contact with the instrument at various points. I have never, except in this instance, seen the eyes bloodshot

from straining in consequence of the presence of a foreign body in the bladder. I have known instances where portions of bougies have remained in the bladder for months and years without producing much irritation; and in one the distress, months after the breaking of a bougie in this viscus, was so trivial that the patient was recommended to take a trip to Madeira for the improvement of his general health and for the relief of the slight local annoyance of which he complained.

The good fortune which enabled me to seize the end of the bougie between the blades of the extracting instrument was certainly great. I need scarcely state that I consider this was mere chance. Possibly being the last part that entered the bladder it was nearest the neck, and hence was the part first touched; but I confess I had no idea of such luck, and my impression is that such a chance would be exceedingly rare were cases of this kind more common than they are.

There is one feature of a positive character, however, in the operation above described, which is, indeed, the chief reason that I venture to give publicity to the case—that is, in reference to the instrument wherewith the extraction was effected. It is a lithotrite of a size so small that as yet the profession cannot be said to be familiar with it. For years back I have been using much smaller instruments than those generally made for the extraction of small stones and fragments from the bladder and urethra; and latterly Mr. Matthews, of Portugal-street, has produced these instruments in great perfection and wonderful strength of the sizes of No. 4 bougie and upwards, the blades being so slender that they can hold between them an object of considerable size, and yet the calibre of both may not be so great as not to pass readily along the urethra. I have found such instruments of great value in dealing with fragments of stone in the bladder; and in such a case as that above related I know of no instrument which could have done such service, for its grasp is stronger than any other that I know of, and for that reason it would hold more firmly, and be less likely to slip. In this instance the instrument did actually slip on the first clutch; but that was possibly because the blades had been but slightly fixed by a short grip. Afterwards several others slipped, and it was on a reapplication of the same instrument that I caught the end of the offending object thus,

and held it so firmly that the extraction was most satisfactorily accomplished.

George-street, Hanover-square, Aug. 1863.

THE INFANT MORTALITY OF CARDIFF reaches the unusual per-centage of 50. Surely this enormous mortality must be owing to preventable causes. It is not creditable to the sanitary commissioners of the town, if such there be, that so deplorable a state of things should exist. It is satisfactory to learn that the authorities are employing the means within their power to remedy such a frightful condition. There can be no local causes for such a lamentable death-rate which are not remediable. We shall look with interest to the next returns of the health of Cardiff.

ON THE UNFAVOURABLE INFLUENCE OF SUDDEN CHANGE OF CLIMATE.

BY J. HENRY BENNET, M.D.,

PHYSICIAN-ACCOUCHEUR TO THE ROYAL FREE HOSPITAL, ETC.

I AM not aware that the attention of the profession has yet been drawn to the unfavourable influence exercised upon health by the sudden change from a northern to a southern, or from a southern to a northern climate, so constantly experienced in these railroad days. And yet this influence exists, even for the strong and well, and is still more decided in the case of invalids. It ought, therefore, to be recognised and taken into consideration by those who send patients abroad, in order that they may instil caution into their minds, and point out the mode in which any bad effects from the change of climate may be avoided.

During the last few years I have four times left England in October, arriving within a week or ten days in the south of Europe, at Mentone; and four times I have left Mentone in May, and arrived soon afterwards in England. At Mentone I am at once called upon to take charge of a number of fellow-countrymen, winter emigrants like myself. On my return to London I see many of them as they arrive or pass through, or hear of them if they, as often occurs, pass to other allegiance. The autumn and spring illnesses from which they often suffer did not at first strike me as presenting anything peculiar; but gradually, as experience has increased, I have become aware, firstly, that these morbid accidents present themselves each year with stereotyped regularity; and secondly, that they are, in a great measure, referable to the *sudden* change of climate rendered possible by rapid railway communication, of which advantage is taken owing to the very natural desire to get over the journey as quickly as possible.

The most marked peculiarity of our climate, as distinguished from that of the continent of Europe, and especially from that of the Mediterranean basin, is the great quantity of vapour which our atmosphere contains. According to Admiral Smythe, the atmosphere of England contains habitually double that of the Mediterranean region. His data are substantiated by a series of observations which I made last winter with the wet and dry bulb thermometers at Mentone. I found the difference between the two was nearly always throughout the winter very great, generally varying from five to ten degrees Fahrenheit. We have the proof also of this fact in our white-blue cloudy sky, and in our mitigated summer heat. The watery vapour screens the earth from the sun, and absorbs its heat; and hence, in part, our mild summers. The absence, or the sooner diminished amount, of this watery vapour in the atmosphere of the Mediterranean region gives a dryness, a clearness, an elasticity to the air which is very peculiar. It enables the light and heat of the sun more easily to reach the earth, and accounts for the clear deep blue of the sky and for the scorching heat of the sun's rays even in midwinter. As a necessary corollary, the nights are clear, brilliantly illuminated by stars and moon, and cold by comparison with the day.

Professor Tyndall, in his lecture on "Heat considered as a mode of Action," recently delivered at the Royal Institution, has shown more clearly than any of his predecessors how great is the heat-absorbing power of aqueous vapour, and its consequent influence upon climate. The heat-absorbing power of moist air varies with its density. It is as high as ninety-eight when the barometer is at thirty inches, and but sixteen when the barometrical pressure is only five inches. Thus the nearer the aqueous vapour is to the earth, where the barometrical pressure is the greatest, the greater its heat-absorbing power, and the greater the protection it affords from the scorching effect of the sun's rays during the day, or from extreme radiation of heat during the night. Professor Tyndall applies these facts by stating that the removal for a single summer night of the aqueous vapour from the atmosphere of England would be attended by the destruction of every plant which a freezing temperature could kill. On the other hand, the day would be as scorching as the night would be cold.

These facts give us the key to the Mediterranean climate—to its hot sunshine during the day in winter, and to its cool nights. The diminution of aqueous vapour in the atmosphere,

on the one hand, allows the sun's rays to reach the earth during the day; and, on the other, allows the earth's heat to radiate rapidly into space at night.

In October invalids leave England's moist atmosphere, when the weather is already getting cold, and the evenings and mornings are foggy. The express train is often taken at Paris for Marseilles, and in sixteen or twenty hours the dry sunshiny Mediterranean region is reached. There it is still summer; the sun is powerful; the temperature high, usually above 70° Fahr. The liver and skin, which were already in England relieved from the stimulus of our mild summer heat, are called violently and suddenly into action. The result is diarrhœa, bilious attacks more or less severe, skin irritation, urticaria, boils, &c. Diarrhœa is so common that few northerners escape; and it is universally, and erroneously I believe, attributed to change of food, to wine, and to such influences.

These attacks are most severe with those who hurry their departure from England, push rapidly to their destination, and reach the south in September or early in October. In my opinion the last week of October is quite early enough for invalids, or even healthy northerners, to arrive in the south of Europe. The cool weather of autumn does not begin until about the second week in November; and a month or six weeks of hot, oppressive southern weather, with a liberal allowance of mosquitoes, is generally damaging to the health of "north country people." The worst cases of bilious derangement that I have to attend each autumn are amongst such.

By the end of April or the early days of May the sheltered Riviera undercliff begins to be disagreeably warm. Moreover, fine midsummer weather has been enjoyed so long that it becomes difficult to believe that winter still reigns in the north. The invalids are tired, also, of their six months' absence from home, and their hearts are set on the return. Once the homeward journey has commenced it is generally rapidly carried on, and many arrive in Paris or in England early in May, much too soon for their own good. In the north of Europe, if the wind is from the south, in April and May the air is mild and balmy, and vegetation makes rapid strides; but until the mountain lands of Norway and Sweden are freed, or partly so, from their canopy of snow, which does not take place until June, a north-east wind brings cold, chilly weather and night frosts. It is this cold, chilly atmosphere, an atmosphere, too, more or less loaded with moisture, that often meets the invalid on his return home. The skin and liver, previously in full operation, are checked suddenly if the journey has been a rapid one, extra work is thrown on the lungs and kidneys, and very often severe attacks of influenza, of coryza, of bronchitis, of hæmoptysis, are the result.

I have pointed out the evil: I must now point out the remedy. It is to ignore the facilities afforded by express trains, and to make both the southern and the northern journeys in such a manner as to become acclimatized to the great changes.

Serious invalids who intend to winter in the south of Europe, are better out of England the last week in September, or early in October; but, as we have seen, their winter residence is scarcely fit for them before the end of October. The two, three, or four intervening weeks should be spent on the road. A quiet, leisurely progress southward allows the human economy to gradually accustom itself to the change of climate. A favourite station with me is Fontainbleau, thirty miles south of Paris. The climate is continental, drier than that of England, the hotels are good, and the forest scenery is very interesting and beautiful. A week or ten days may be spent there both pleasantly and profitably for health, much more so than in Paris.

Further south we have Valence, Aix Nimes, Arles, &c. I would, however, more especially recommend a small watering-place which I may nearly lay claim to have discovered, as far as my countrymen are concerned. It is Gréoulx, a five hours' picturesque drive from Aix-en-Provence. Gréoulx is merely a village, with a large comfortable hotel, in its own grounds, erected over a hot sulphur spring, one of the most powerful and longest known thermal waters of the south of France. Its celebrity, however, is all but entirely confined to that part of France. I myself found it out by the map, whilst trying to discover an autumn and spring intermediary station. I visited it last May, and was much pleased with the scenery from Aix, with the hotel and its grounds, and with the very lovely district in which it is situated. There are two wild mountain rivers—the Durance and one of its tributaries—within a mile of the house, and fishing and shooting are provided for the inmates, with all the resources of French social country life. The hotel makes up some 200 beds. Gréoulx is quite out of the beaten track, far away from railways, amongst the hills of Provence, and a residence there must have many charms. I sent a little colony of my Mentone friends and patients there this spring, and they were all delighted with it. There is an intelligent resident French physician, Dr. Jaubert. I do not think a pleasanter place could be found to spend a fortnight in on the way south.

The same course can be followed by invalids on their return north. The departure from Mentone, Nice, Cannes, or from Italy or Spain, can take place at the end of April, or on the first day of May; and a leisurely journey may be made towards the north, so as to reach England by the end of May or the first day of June. Gréoulx is open on the 1st of May, and is even thus early very lovely; the deciduous trees in full leaf, and the nightingale in full song. A fortnight at Gréoulx, a week at Fontainbleau, and May is pleasantly consumed, and England and its climate reached by slow stages, which neutralize the risks attendant upon the "cannon-ball" style of travelling.

Grosvenor-street, August, 1863.

ON A

METHOD OF OPERATING FOR RETENTION OF URINE IN CERTAIN CASES OF CANCER OF THE VULVA.

BY CHARLES H. MOORE, ESQ., F.R.C.S.,
SURGEON TO THE MIDDLESEX HOSPITAL.

THE necessity of puncturing the bladder in women so seldom arises, that few observations can be made upon the best method of performing that operation. I have been only twice called upon to relieve retention of urine by tapping the female bladder; yet, so far as I can learn, this is certainly not below the average number of cases in which the surgeons of the day have required to do so. In the male sex the operation is common enough in everyone's practice, and is by Mr. Cock's method very satisfactory.

There appear to be serious objections to the methods suggested for puncturing the bladder in women. The most promising operation is that through the linea alba, and the most disappointing; for it, more than any other, is attended with the subsequent inconvenience, that an instrument can scarcely, and sometimes can not, be retained in the track of the puncture. The cause of this difficulty is twofold. On the one hand, as it is the function of the bladder to expel its contents, a catheter or a canula, at least as sure to be extruded as the natural contents of the organ; on the other hand, the channel of the puncture, though at first direct, becomes curved as the urine escapes. When the bladder is full, the apertures in the linea alba and the bladder correspond in situation. It is at this time that the puncture is made. But when the bladder contracts, the puncture in it descends far below that in the linea alba, and a tube, which is flexible enough to lie in both openings, is easily pushed out of the inner one by the bladder. Unless the tube can be reintroduced, which is not always the case, the urine collects in the bladder again, or is infiltered in the tissues outside it.

To the operation of puncturing the bladder through the front wall of the vagina, an ample objection is supplied by every case of cancer or injury in which an unnatural communication is made between these parts. The irritation of the vagina by the urine is most distressing, and makes it improper for a surgeon purposely to establish such an opening. Moreover, in cases requiring the operation in question, it is most probable that the vagina itself will be obstructed by the disease, and not within reach for an operation.

To plunge a trocar and canula into the distended bladder through diseased structures in the perineum would present no difficulty in the mere operation, but would probably be attended with much trouble to the surgeon and pain to the patient in the subsequent management of the tube. Of the plan of puncturing through the symphysis pubis I have no knowledge.

In the following case I adopted a method of operating which appeared to me likely to combine the advantages and avoid

the disadvantages of the plans just reviewed. It afforded easy exit for the urine; it averted the liability of the tube to slip out of the bladder; it allowed of the syringing or irrigation of the bladder, which might become necessary; and it was capable of being continuously employed throughout the remainder of the patient's life.

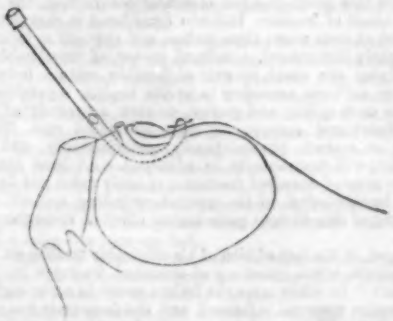
A woman aged fifty has been under my care for some weeks in one of the Cancer wards of the Middlesex Hospital. She was admitted with a hard spherical tumour, as large as a middle-sized orange, springing from the ramus of the left pubes and ischium. None of the superficial structures in the perineum were connected with it, but the left half of the vulva was raised and spread over it. The orifice of the vagina was much narrowed, and the finger could scarcely be introduced into it. Neither could the os uteri be reached beyond the tumour, but the vagina was felt to be healthy. There was no ulceration of the tumour, and no disease of the inguinal glands. The tumour had first attracted attention by its swelling; it had not been noticed more than five months; it had grown rapidly, and had lately caused much pain, rendering it impossible for her to move about and attend to her duties. After some weeks the disease increased, and, the veins beneath the pubes being obstructed by it, the whole vulva became dusky and œdematous. The clitoris especially, and the nymphæ, enlarged and protruded; and the former grew hard, as if filled with cancerous matter. The suffering attending this state of the vulva was very great, and was not relieved by any ulceration of the swollen or the obstructing parts.

In the early stages of the case no inconvenience attended the act of micturition, but as the disease advanced it compressed the meatus urinarius, and a difficulty began to be experienced in voiding the urine. This difficulty increased; the desire to pass urine was frequent and urgent; the quantity which escaped at each effort lessened; at length a teaspoonful only was voided a few times a day, and no permanent relief was obtained even in the warm hip-bath. The bladder rose to the level of the umbilicus—a broad smooth rounded swelling, dull on percussion, and tender when touched. The countenance looked distressed, and its hue dark.

No relief could be afforded to the bladder by the use of the catheter. The meatus was hidden in the swollen parts, and their tender condition, together with the tight constriction of the urinary passage, precluded the use of instruments. As soon, therefore, as the obstruction had reached the degree which has just been described, and it was evident that no relief to the tension of the parts was about to be afforded by a spontaneous sloughing of the tumour, I determined to puncture the bladder.

Having had chloroform administered, I introduced Mr. Cock's long curved trocar and canula about an inch above the pubes, and passed it through the linea alba into the bladder. Withdrawing the trocar, I evacuated about half the urine, and relaxed the tension of the bladder. Then directing the canula behind the symphysis pubis, and pressing it, as nearly as I could judge, against the inner end of the meatus urinarius, I reintroduced the trocar into the canula, and pushed both through to the vulva. The relaxation of the bladder enabled me so far to depress the handle of the instrument against the abdomen that its point came out between the orifices of the vagina and the meatus. The bladder was thus transfixed. I then withdrew the trocar, and passed a string through the canula. To the lower end of the string I attached the point of a gum elastic catheter of the same size as the canula, and was thus enabled to pull both upwards together, and, as I withdrew the canula, to substitute the catheter for it in the double puncture. A cross piece of wood tied in front of the abdomen to the upper end of the catheter prevented it from slipping backward, and I found that when the wood was against the skin about one-half of the catheter projected below the vulva; but of course no urine escaped. It only remained to make a lateral opening at about the middle of the catheter in the part nearest the vulva, through which the urine might flow when that part of the instrument was pulled far enough upward.

This arrangement was found to be both convenient and safe. Each end of the catheter was secured against withdrawal: the upper by the piece of wood, and the lower by the ivory ring of the catheter. The bladder being not simply punctured, but transfixed, its wall could slide up and down the catheter securely, but the instrument could not be thrust out of the cavity. And as to the evacuation of the urine, it was only necessary, after oiling the lower half of the catheter, to pull upon its upper end until the lateral hole made in its middle reached the vesical cavity; the urine would then flow out through the lower end of the instrument. When the bladder was emptied, and the upper end of the catheter oiled, traction on the lower end of it brought the hole out of the bladder, and no urine could flow through it.



Sleep and freedom from pain followed the relief of the retention. In a couple of days the dusky hue of the countenance had disappeared, and a little appetite returned. Some tenderness and swelling came on before the end of a week in the anterior part of the abdomen, a little to the right of the upper puncture, but both subsided in a few days. About a fortnight after the operation the upper track became too large for the catheter, and the urine welled up continuously by the side of it. Some pus, mucus, and a little urine escaped when the catheter was pulled up for the purpose of emptying the bladder. Fearing there might be inflammation of the bladder from the constant pressure of the instrument, I had a new catheter introduced, and the bladder frequently washed out with tepid water. As the catheter had three openings—one above, one in the bladder, and one below—the cleansing was very conveniently done by means of a syringe. The secretion of pus and mucus speedily ceased, and the patient from that time continued at ease, so far as micturition is concerned, and she suffered from the original disease considerably less than in the early period of the case.

Piccadilly, August, 1863.

ON FRACTURES.

By W. H. B. WINCHESTER, Esq., F.R.C.S.

THERE is no subject within the entire range of surgery on which so much has been written and yet so little real practical improvement made as that of fractures. A system so long and perseveringly followed as that on which the present treatment is based, but which has proved so barren of good results, may reasonably be suspected of embracing some radical defect both of principle and practice. It will not be amiss, therefore, to examine one or two of its leading features, for the purpose of discovering the cause and its remedy.

In the first place, with regard to Extension. The views entertained respecting it are so erroneous, that until they are entirely abandoned no improvement can take place. Muscular contraction has been, and still is, the real bugbear. To counteract its supposed baneful influence, or in other words, to keep up permanent extension, has been the chief object sought to be attained, and no combination of forces the ingenuity of mechanicians could devise has been considered too powerful to attempt its accomplishment. Look, for instance, at the powerful screws attached to the extremities of some instruments—at the railway splint of Professor Dummreicher, some time since used in St. Bartholomew's Hospital, by which the lower part of the splint, supporting and holding in its grasp the lower or separated portion of the limb, is so contrived as to run away with it to the utmost limit of muscular elasticity. Such, too, is the effect of the practice of attaching a heavy weight to a cord from the foot, and letting it run over a pulley at the end of the bedstead. A similar result also follows the application of the most commonly used of all splints—viz., Desault's long splint, and of all ordinary forms of apparatus. Extension, therefore, as at present understood and practised by the above means, is a persistently active, and as such an injurious, force. It can only be beneficial when temporarily employed to

effect replacement. As soon as this is accomplished it ought to be superseded by the passive, enduring, and consequently beneficial force expressed by the term Retention.

Now this much-dreaded muscular contraction, the involuntary result of fracture, hitherto considered so obstructive, discarded as even worse than useless, and opposed as injurious, is, if rightly understood, a natural power of inestimable value, supplying the exact amount of forcible contact between the broken surfaces necessary to excite healthy reparative action in the most speedy and perfect manner, accurately adjusted to the functional capacity of each individual case. That this view is correct, physiologically, pathologically, and mechanically, will undoubtedly be admitted. At least nine-tenths of the cases of ununited fractures, of tardy union and deformity, may be attributed to the misunderstanding, neglect, or overlooking of this obvious pathological effect of muscular contraction.

Paget, in the last edition of his admirable treatise on Surgical Pathology, when speaking of ununited fractures (p. 193), remarks: "In other cases the failure seems to occur earlier. No reparative material is formed, and the fragments remain quite disunited. This may be the result of accidental hindrances of the normal reparative process; but it sometimes appears like a simple defect of formative power—a defect which, I believe, cannot be explained, and which seems the more remarkable when we observe the many changes which may at a later time be effected, as if to diminish the evil of want of union." Is not this its true solution or explanation—viz., that nature, not unequal to the task, has only been deprived by art of the very means which she has specially provided for its accomplishment? How is this provision of nature to be rendered available? By adopting the means I have frequently had occasion to describe—viz., the necessity of aiding and directing nature by suitable, and not retarding or obstructing her by improper, forms of apparatus.

These views have been more than once endorsed by THE LANCET, tacitly assented to by the profession generally, and practically applied by some few of its members. The International Jurors also adopted and embodied them in their report, and, I may add, awarded "Honourable mention" to my apparatus. So soon, however, as their correctness and importance shall be fully realized by the profession generally, must the treatment be conducted in accordance with them, and then will the doubt and discredit in which it is at present too frequently involved be succeeded by a certainty and uniformity of good results which a fixed and unerring principle alone can ensure.

Knowl-hill, Berks, August, 1863.

A Mirror

OF THE PRACTICE OF

MEDICINE AND SURGERY

IN THE

HOSPITALS OF LONDON.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum, et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

MALIGNANT DISEASE OF THE PERITONEUM AND STOMACH, FOLLOWED BY ASCITES AND A FATAL RESULT; EXTENSION OF THE DISEASE TO OTHER ORGANS.

(Under the care of Dr. WILKS.)

In both the following cases the peritoneum was involved in carcinomatous disease, but in the first the symptoms were primarily gastric, and seemed to be hereditary; and after death the stomach was found extensively diseased. It is instructive to contrast the two cases, more especially as in the second the disease was almost solely confined to the peritoneum, and appeared to run a rapidly fatal course.

The following abstract is taken from the notes of Mr. John Channdy Clark, clinical clerk.

Amy C——, aged thirty-eight, married, was admitted into Miriam ward June 3rd, 1863. She was in good health up to a year previously, when she began to vomit everything she took, either immediately or an hour or so after eating. In five or six weeks she had pain after taking food, which was only relieved by vomiting. Three months before admission the abdomen had swelled and become very hard; the bowels were costive. She had been gradually emaciating. Had not vomited during the last fortnight, but the gastric pain had been more severe, and had prevented her from obtaining much sleep. She was the mother of nine children, five of whom died when young; and her mother, she stated, was delicate and troubled with constant vomiting. Although only thirty-eight, she looked nearly fifty, and was extremely emaciated; no tumour in belly, but ascites was present; chest normal; pulse 100, small; tongue clean. An enema was administered with good effect, and she took two ounces of brandy.

The patient was examined by Dr. Wilks and Dr. Habershon on the 4th: the former thought that there was probably malignant disease of the stomach or peritoneum, but in the absence of any tumour it was impossible in the present instance to point out the exact locality of the disease. The urine was normal, excepting some phosphates. The brandy was continued.

On the 5th there was general pain over the entire abdomen, and as she disliked the brandy, wine was given.

She was much better next day from the effects of an opiate, and also on the 7th. On the 9th she became very weak, and enuresis set in, the motions becoming very offensive. She was taken suddenly worse, and died on the 11th.

Autopsy, twenty-four hours after death.—The body was extremely wasted; the abdomen distended with fluid. The pleura had in various places some small, firm, flattened, semi-transparent tubercles, which seemed to correspond in appearance with the malignant tubercles found in the abdomen. Besides these there were at one spot, in connexion with similar material in the interior, some small, yellow, softer tubercles, like the yellow scrofulous deposit. On making a section of the lung there was abundance of this found in connexion with some low organizable deposit in the tissue itself as well as in the bronchial glands with which it was in contact. The principal disease, indeed, appeared to be in the bronchial glands. Three or four of these were much enlarged by a yellow deposit, which in some places was softening. These were in contact with the lung-tissue, which was involved in like manner; and in the neighbourhood were the scattered yellow tubercles before spoken of. The semi-transparent tubercles, which were probably cancerous, were at a distance, and only seen on the edge of the lung in connexion with similar tubercles on the pleura. The heart was very much wasted. The abdomen was full of serum of a red colour, owing to the transudation of blood. The whole membrane was covered with small cancerous tubercles, and much thickened. The omentum formed a hard band-like mass closely connected to the colon. The latter was much contracted, as were also the appendices epiploicæ, and adherent to the stomach. The stomach adhered to the liver, colon, and surrounding parts. When removed, the stomach was seen to be about the natural size and rather hard. Its pyloric half was very hard from thickening of the coats. On opening it, these were found to be much increased in thickness from infiltration of the walls with degenerating cancer. The muscular coat was hypertrophied, but intermixed with it were a number of yellow spots of decayed adventitious deposit. External to this was a quantity of new material composed of the same white curdy deposit associated with a firmer material. This involved the outside of the stomach at the pylorus, and here some glands were enlarged and adherent. Beneath the mucous coat there was also the same deposit, and the mucous membrane was involved to a great extent—from just below the pylorus to the middle of the stomach. There was no actual ulcer, but the mucous membrane was disintegrating and had a wormeaten appearance. The greatest thickening of the walls was at the pylorus, and it gradually ceased at the middle of the organ. The outside was covered with small cancerous tubercles, but there was no actual tumour. The liver contained a number of round deposits the size of peas, which on section resembled tubercle, being opaque and yellow. Around them, however, was a transparent greyish exudation, which no doubt was the primary deposition, and of a cancerous character. The vessels entering the liver were somewhat encroached upon. None of the other viscera were positively affected. The uterus was wasted, and its walls contained some degenerated tissue, either original or adventitious: a number of small, yellow, soft granules occupied its substance.

ST. GEORGE'S HOSPITAL.

MALIGNANT DISEASE OF THE PERITONEUM, WITH ASCITES; QUICKLY FATAL RESULT.

(Under the care of Dr. FULLER.)

ROSE P——, a Frenchwoman, aged fifty-five, was admitted March 23rd, 1863. She stated that three months before she had observed an enlargement in the lower portion of the abdomen, which had gradually spread over the whole belly, occasioning pain of no very severe character, but great uneasiness and occasional vomiting. On admission the abdomen was distended with flatus and a large mass with no distinct edges, and which appeared to belong to the whole abdominal cavity. No fluid could be detected. Pressure only caused pain low down on the right side. The urine was high-coloured, full of urates, and not albuminous. The motions were natural. Iodine and bichloride of mercury were prescribed. On the 31st she was thinner and weaker, and complained more of pain than she had before suffered. On April 5th vomiting occurred frequently, she was very anxious-looking, the pulse extremely weak, and the abdomen very tense and tympanitic. On the 8th she is reported to have been greatly exhausted by the continued vomiting; and this state of things continued up to the 12th, when she died quietly.

Autopsy, thirteen hours after death.—The body was emaciated; the abdomen distended with fluid; the pleuræ were natural, the lungs healthy, and the bronchial tubes congested. Upon the visceral layer of pericardium was some old false membrane, but no adhesions. The mitral valve was slightly thickened. The peritoneal cavity contained a large quantity of clear serous fluid, by which the diaphragm was considerably elevated. Scattered upon the peritoneum—that lining the walls as well as the folds enveloping the viscera—were numerous white firm deposits as large as peas or mustard seeds, and resembling hard encephaloid. These were particularly abundant in the great omentum. Immediately under the capsule of the right kidney was a small growth of a similar character. The folds of peritoneum about the uterus were greatly thickened by malignant deposit of a somewhat softer consistence. The liver was contracted and attached to the diaphragm by fine adhesions. On the pleural surface of the latter were several large deposits of the same kind as occurred elsewhere. Under the microscope the small deposits in the peritoneum were found to consist of small cells, mostly without nuclei, some with a single nucleus. The other viscera were normal.

ST. MARY'S HOSPITAL.

CLINICAL REMARKS ON A CASE OF DISEASE OF THE LUMBAR SPINE, WITH AN ABSCESS OPENING IN THE GROIN, SUCCESSFULLY TREATED BY THE ACTUAL CAUTERY AND IODINE INJECTIONS.

(Under the care of Mr. URE.)

E. P——, aged thirty-six, married, and mother of a family, a woman with dark hair, and a pale, clear complexion, was admitted in April, 1863, on account of a fluctuating tumour, the size of a small apple, situate in the left groin. A distinct impulse on coughing could be felt in the swelling. The overlying integument was natural. For four years previously the patient had been weakly. About Midsummer, 1862, she complained of pain in the loin, passing round to the hip on left side, which caused her to limp in her gait. She continued much the same till February last, when the pain became aggravated, the swelling in the groin made its appearance, and she was unable to stoop. She was then recommended by a medical practitioner to apply tincture of iodine to the swelling, which she accordingly did.

On admittance, there was distinct pain referable to the lower lumbar vertebræ, and sense of weakness.

On April 30th, Mr. Ure applied the actual cautery on each side of these vertebræ. The result was subsidence of the pain and restoration of power, so that she could get about, and likewise stoop, without inconvenience. The fluctuating tumour remained unchanged. She shortly after went home to resume her household duties.

She was re-admitted on June 10th, the tumour having opened spontaneously the previous day, and discharged a quantity of purulent matter. On careful examination with a probe, a sinus was found, extending downwards and backwards for about three inches and a half.

June 16th.—Mr. Ure directed the sinus to be injected daily with a drachm of tincture of iodine, diluted with three drachms of water. The patient was allowed a generous diet, with four ounces of sherry daily. She also took draughts containing tincture and decoction of cinchona, with carbonate of ammonia.

July 6th.—There was manifest improvement in all respects.

16th.—The fistulous opening was reduced to a mere fissure, from which a little citron-coloured serosity exuded. She was free from pain. Her general health was greatly amended.

20th.—The employment of the injection was suspended, and the part dressed with compound mercurial cerate spread on lint, and a spica bandage applied.

29th.—She went home at her own desire, able to get about comfortably. There remained simply a trifling gleety discharge from a narrow fissure in the fold of the groin.

In some clinical remarks, Mr. Ure observed that the actual cautery was employed with the view of abating the deep-seated inflammation connected with the lumbar spine—an object which it seemed to have effected. Disease may make considerable inroads in this situation without causing any undue prominence outwardly. The lumbar region is naturally concave, and hence the spinous processes do not project. When the body of one of the vertebræ gives way, it then becomes rectilinear, but does not make a projection posteriorly, as in the dorsal region. As a general rule, he deems it hazardous to open abscesses connected with disease of the spine. It is preferable to leave them to nature, as was Dupuytren's practice. The cyst has to undergo a certain process of maturation, and after a shorter or longer period a spontaneous outlet is formed. On the other hand, when the abscess is interfered with, it not unfrequently happens, as stated by Sir A. Cooper, that "violent symptoms of constitutional irritation are apt to come on, such as great depression of strength, loss of appetite, and the patient is soon reduced to the lowest extremity."—(Lectures on Surgery, p. 569.)

The injection of diluted tincture of iodine seems to modify favourably the secreting surface and promote the contraction of the fistulous canal, as it did in the above instance.

ROYAL MATERNITY HOSPITAL, EDINBURGH.

CASE OF CIRRHOSIS OF THE LIVER IN A CHILD FIVE YEARS OF AGE.

(*Reported by* DAVID MURRAY, M.D., Resident Surgeon.)

M. C——, aged five years, came under Dr. Murray's care about three weeks before her death, complaining of severe pains in the abdomen, with bearing down, and passage of blood. On investigating her history, it was found that up to three years of age she had always been a very healthy child, when at this time she began to experience transitory pains in the abdomen, more especially in the hepatic region. At times these were so severe that the child could not tolerate them, and, though naturally patient, she screamed in agony. Soon afterwards she began to be affected with a sensation of bearing down, which caused her to go to stool very frequently. Her constitution began to give way, and from being strong and healthy she became pale and anæmic. The mother stated that she applied to several medical men, without however deriving any good. At this time no suspicion was entertained regarding the nature of the case. She continued in this chronic condition of ill-health, having the bearing-down sensation and pain generally diffused over the abdomen, when the mother's attention was attracted by the child's passing blood at stool. She was then placed under Dr. Murray's care. On examination, the abdomen was found to be very much distended, but no fluctuation could be detected. The liver was hard and nodulated to the touch, and when pressed upon the child cried out; the feeling was exactly similar to that presented by a cirrhosed liver. To relieve the pain, warm fomentations were applied over the abdomen, and a few doses of Dover's powder given, which had the desired effect. About a fortnight after she was first seen the patient was attacked with severe hæmatemesis, when she vomited several pints of dark venous-looking clotted blood. A few doses of gallic acid, with cold cloths, and rest in the recumbent posture, were ordered, which for the time

had the effect of stopping the hæmorrhage; but a few hours afterwards a second attack supervened, which resulted in the death of the child.

As a wish was expressed to have a post-mortem examination, the mother willingly complied with it. On making an incision through the abdominal parietes, the first object which presented itself was the liver, which was covered with nodules varying in size from a hazel-nut to a hen's egg. The parenchyma presented everywhere a granular character, and of a dense, firm, leathery consistence. The granulations varied in size from a pin's head to a linseed, and were separated by corresponding areolar tissue. The intestines were universally covered with ecchymosed spots, and from the rectum upwards were filled with masses and clots of dark venous-looking blood. The stomach also was packed full of clots. The whole surface of the mucous membrane, from the stomach downwards, was carefully washed and examined, but no lesion of any kind could be detected; thus proving that the blood was entirely passive in its origin, arising from the obstruction to the passage of the blood through the portal vein. The spleen was greatly enlarged and much congested. No examination was made of the head.

Here was a case of distinct cirrhosis of the liver in a child only five years of age, which was not congenital, for she enjoyed good health till she was three years old, nor could any particular cause be assigned for it. The child herself had a peculiar repugnance to alcoholic stimulants of every kind. With regard to the parents themselves they certainly were very intemperate in their habits. The records of children's complaints do not present a similar case in so young an individual.

GLASGOW ROYAL INFIRMARY.

UNILOCULAR OVARIAN TUMOUR; OVARIOTOMY; FATAL RESULT.

(Under the care of Dr. LYON.)

A. M——, aged forty, unmarried, admitted to the medical wards December 25th, 1862. She had an ovarian tumour of a year's growth, which began in the right iliac region. The abdomen was forty-two inches in girth, and still enlarging. From the history and then present appearances, the tumour was supposed to be unilocular, and to have no adhesions to parietes or uterus. The patient was of a robust constitution, and anxious to be relieved from the pain and annoyance of the tumour.

Jan. 30th, 1863.—Dr. Lyon, with the unanimous consent of his colleagues, assisted by Drs. Morton and Buchanan and Mr. Lister, operated by an incision four inches in length in the middle line below the umbilicus. The operation was performed in a large room, specially prepared, after the method, and with all the precautions as to temperature &c., advised by recent operators. There were no adhesions. Twenty-seven pounds and a half of thick grumous fluid were drawn off. The pedicle was unusually broad (above six inches), and long enough to reach outside the abdomen. The patient became very faint after the tapping of the cyst, but otherwise bore the operation well.

31st.—She did well for the first twenty-four hours. Pulse 72; annoyed by pain in the loins, probably from the dragging of the pedicle on the uterus. In the afternoon the pulse began to rise, and had reached to 116 by night—not wiry, but soft and full; abdomen slightly tympanitic; tenderness in left iliac region; constant belching. These symptoms were met locally by linseed poultices, and generally by hydrocyanic acid, calomel and opium, and laudanum injections.

Feb. 1st.—Pulse rose steadily to 140 before night; never hard, but weak and compressible. Other symptoms aggravated. Countenance sallow and contracted, but manner cheerful. The treatment continued, with a tablespoonful of brandy every two hours.

2nd.—One A.M.: Pulse 150; clammy sweat over hands and arms. She sank gradually, and died at eight A.M.; being within four hours of three days from the time of operation.

Inspection, twenty-four hours after death.—Abdomen tympanitic. No signs of union in the wound; deep congestion about its peritoneal aspect. Intestines and peritoneum more or less congested, and coated with films of semi-purulent lymph. Cavity of pelvis filled with sero-purulent fluid, containing shreds of pus and lymph. Fundus of uterus raised from the floor of the pelvis by the pedicle.

This is the second case of ovariotomy performed in this hospital. Dr. Lyon operated twelve or fourteen years ago, also with an unfortunate result.

Reviews and Notices of Books.

A Clinical Memoir on Certain Diseases of the Eye and Ear, consequent on Inherited Syphilis. By JONATHAN HUTCHINSON, F.R.C.S. London: Churchill.

MR. HUTCHINSON is by no means an alarmist; and although in this book he gives the history of his clinical study of certain diseases of the eye and ear which he believes to be consequent on a metamorphic taint of hereditary venereal disease, he does not re-echo the vague declamation of those unclean transcendentalists in medicine who review the whole army of sufferers from constitutional disease with the cry of "Hereditary syphilis!" and would have us believe that the whole world is affected with the malady. The result of his investigations is to define certain diseases as consequent on the taint, but to exclude many others, which those, for example, who declare scrofula to be the after-test of parental syphilis would classify with them as of common and primary syphilitic origin.

The diseases which Mr. Hutchinson connects with hereditary syphilis are, acute iritis, chronic interstitial keratitis, inflammations of the choroid and retina, and diseases of the vitreous body, occurring under certain circumstances, and in conjunction with certain other signs. Now—and Mr. Hutchinson would, no doubt, agree with us so far—none of these diseases of the eye are in themselves characteristic of inherited syphilis, or indeed of the syphilitic taint at all. Their dependence, consequently, upon that taint will be deduced by the coincidence of other signs, and by the nature of the history obtained. This, therefore, is the important diagnostic point, and here Mr. Hutchinson enters into very full details. In the chapter on Interstitial Keratitis, after a history of 102 cases, he gives an excellent summary, which we cannot do better than extract for the guidance of those who have opportunities of investigating the matter:—

"The series presents very few exceptions indeed to the following statements: *a. That the patients were of peculiar pallor.* In most the complexion was of a pale earthy or sallow hue, without a vestige of colour; and in none of the exceptional cases was there any degree of the excessive floridness so commonly seen in the subjects of glandular struma. *b. That the skin generally, and that of the face especially, was thick, coarse, and flabby.* These conditions are intended to be comprised whenever the term 'syphilitic physiognomy' is used. I have never employed the latter expression except to denote a striking and remarkable condition, such as would, from its peculiarity, have arrested the attention of the most cursory observer. *c. That the bridge of the nose was wide and depressed.* This also is included whenever the above term has been used. *d. That in the skin of the face there were numerous small pits and scars, and about the angles of the mouth the radiating scars of former ulcerations.* The common non-specific eruptions of childhood—impetigo, porrigo, and eczema—leave no perceptible scars, whilst their syphilitic congeners almost invariably do. Small-pox, chicken-pox, and herpes undoubtedly do cause pits and scars, which are often undistinguishable from those of the syphilides; the conjunction of fissures at the oral angles with little pits in the skin of the face, a history of no one of these three affections being obtainable, is, however, very suspicious. *e. That in those who had cut their permanent set the condition of the upper central incisor teeth was very peculiar, both in form, colour, and size.* As diagnostic of hereditary syphilis, various peculiarities are often presented by the other teeth, especially the canines; but *the upper central incisors are the test teeth.* When first cut these teeth are usually short and narrow from side to side at their edges. In the edge is a crescentic portion, thinner than the rest, which after a time breaks away, leaving a broad, shallow, vertical notch, which is permanent for some years, but between twenty and thirty usually becomes obliterated by the premature wearing down of the tooth. The two teeth often converge, but sometimes they stand widely apart. In certain instances in which the notch is either wholly absent or but slightly marked, there is still a peculiar colour, and a narrow squareness of form, which are easily recognised by the practised eye. In a considerable number of the cases cited no mention is made of the teeth, the notes having been taken before I was aware of the value of

these peculiarities as a symptom. I have latterly, however, made it a rule always to look into the mouth, and as yet I have not met with a single example of well characterized interstitial keratitis, occurring in both eyes, in which the teeth were of normal size and shape. Indeed there can be no doubt whatever as to the truth of the assertion that this malformation of the upper incisors (permanent set) is all but invariably found in the subjects of this disease. A few months' observation at any large ophthalmic hospital will, I think, satisfy anyone of this clinical fact.

"The following special affections were coincident with the keratitic disease:—Large scars in the soft palate and pharynx in eleven instances. Deafness, consequent on otorrhœa, in seventeen. Nodes in nine (tibia, four; radius, two; head, two; ulna, one). Psoriasis on the face in four. Destruction of the nose by erosive lupus in three. Suppurated glands in the neck in three. Laryngeal disease in four. Tinea tarsi in four. Swelling of the knee-joint in three. Inverted eyelids in one. Lachrymal abscess in three. Exfoliation of the alveolus of the upper jaw in two.

"*Previous history, more especially as regards infancy.* — In more than half the cases a clear history of the occurrence of symptoms of inherited syphilis in infancy (rash, sore mouth, ulcers at anus, prolonged snuffles, &c.) was obtained. This proportion would probably have been much increased, but that in many cases I was unable to see the patient's mother, or anyone who could answer questions on this head. In several which I have not included in it there was a history of one or more very suspicious symptoms; the group, however, not being sufficiently complete to allow of a confident statement. In numerous instances the mothers admitted that some of their other children had also suffered from similar symptoms in infancy. Many of those cases in which I was unable to obtain a history or to make inquiry as to infantile symptoms are those in which the physiognomy, teeth, &c., were most characteristic. The frequency of otorrhœa, ulceration of the palate, &c., has already been stated."—pp. 116—119.

The value of this group of clinical results will be fully understood when we call to mind that until Mr. Hutchinson began his researches, these ordinary syphilitic indications were never connected with the condition of the eyes or teeth. Now, few can doubt the truthfulness of his observations. He has unveiled the nature of a large and most important class of infantile diseases, and we believe that every successive series of observations by independent persons will only confirm the accuracy and enhance the value of Mr. Hutchinson's labours. No surgeon in practice can now afford to neglect the indications which he has established; and in recognising the syphilitic nature of certain infantile affections of the eye, which he clearly defines, not only does Mr. Hutchinson point the way to rescue many from blindness, but, in combating the syphilitic taint, to protect themselves and their future offspring from a long train of inherited disorders.

A Manual of Zoology. By M. MILNE-EDWARDS. Translated from the last French Edition, by ROBERT KNOX, M.D., F.R.S.E. Second Edition, with 572 Engravings. London: Renshaw.

WHEN an able man translates a good foreign work on some subject he has specially studied, and adds to it notes and observations of his own, the translation will in all probability prove a more valuable volume than the original treatise. This is certainly the case with Dr. Knox's rendering of Milne-Edwards' well-known manual; for in its English dress we find that it contains, briefly but succinctly expressed, the matured views of two very eminent men. Dr. Knox took great interest in the success of this volume, and up to the time of his death was daily occupied in making corrections and notes for this new edition. He spared no pains to render his friend's book useful and attractive; and in addition to making many fresh observations, was justly proud of being able to introduce some very graphic sketches from the pencil of one of his most distinguished pupils—the late Professor Edward Forbes. Unfortunately, however, Dr. Knox only lived to see the first few sheets in type; and the volume, therefore, had to be passed through the press by Mr. Carter Blake. This gentleman has also added a glossarial index, and two tables of zoological classification, which cannot but prove useful to students.

The work in its original form has gone through many editions, and has probably been more extensively read than any other elementary treatise on Natural History. We believe the translation will have as great a circulation in this country; for not only is it admirably adapted, by the clearness of its style and arrangement, to form a text-book in all schools and colleges, but its pages may be read with advantage by every scientific man desirous of being found *au courant* with the present state of zoological knowledge.

THE PROVINCIAL MEDICAL SCHOOLS AND THE DEGREE OF MASTER IN SURGERY.

To the Editor of THE LANCET.

SIR,—The regulations for the degree of Master in Surgery, lately instituted by the University of London, when compared with those for admission to the Fellowship of the College of Surgeons, would seem to prove that provincial Schools of Medicine are regarded in a very different light by the respective governing bodies of these two institutions. Each prescribes long course of study for candidates; but the University grants its degrees and offers its honours to all who, after complying with certain educational regulations, prove their competency by passing a series of examinations, and, so long as the necessary knowledge *is* present, is regardless whether it has been obtained in London or at provincial schools.

The College, on the contrary, refuses to examine for the Fellowship any but those who have studied three years in London, and thus virtually excludes all who have been educated elsewhere, since it is not likely that any provincial student will spend three years at a metropolitan hospital after completing the ordinary curriculum at his own.

Now, if the instruction given at provincial schools is sufficient to qualify for the University degree in Surgery, but not for the College Fellowship, it follows that less professional knowledge is required for the former than for the latter. Several circumstances, however, lead me to believe that it is not the shortcomings of the provincial schools and hospitals which cause their students to be excluded from the Fellowship.

The College Council cannot regard the instruction given in Edinburgh or Paris as insufficient to qualify for the Fellowship, yet attendance at hospitals in these cities is not accepted in lieu of attendance in London.

Again: graduates in Medicine of Oxford, Cambridge, and London are only examined for the Fellowship in Surgery, their proficiency in other subjects being assumed by their degree.

Since residence in London is not necessary for the degree of any of these universities, it seems that the College Council acknowledge the qualifications of provincial schools and hospitals for instruction in everything except surgery. But surely there cannot be so great a difference between the hospital surgeons in the metropolis and those in other large towns, that the latter are unable to impart such surgical knowledge as will render students fit for the Fellowship.

Lastly, Mr. Luke, in his reply to Mr. Turner at the annual meeting of the Fellows, did not give want of qualifications as a reason for not fully recognising the provincial medical schools, but merely said that the schools in London were sufficient for educational purposes. If, then, the provincial schools are qualified to give proper instruction in all branches of medical education, the only purpose which the regulation about residence in London can serve is to attract to the metropolitan schools men who would otherwise study elsewhere. The institution of the degree of Master in Surgery will in time prevent it having even this effect. But I hope that the changes lately effected in the Council of the College will produce corresponding changes in its proceedings, and that before long we shall see the abolition of the invidious distinction at present made between provincial and metropolitan schools of medicine.

I am, Sir, your obedient servant,

August, 1863. A PROVINCIAL SURGEON.

TO LET.—A poor invalid gentleman, very much reduced, lately read in a medical paper something about "letting blood." The unhappy weakly creature writes to us to know if we can inform him "who lets it," and whether he can on moderate terms hire some for a few years. We refer him to THE LANCET.—*Punch.*

THE LANCET.

LONDON: SATURDAY, AUGUST 22, 1863.

DURING the past and previous weeks a discussion has been going on in the public journals in connexion with a very important subject affecting the profession of Medicine. We have hitherto refrained from alluding to it, preferring to be heard when those who first occupied the tribune shall have had their say. But as the chief organ of the medical profession in this country, we feel bound not to let the subject pass without a special recognition. Need we state that we allude to the practice of VIVISECTION, or the performance of operations and investigations through the aid of cutting instruments upon animals whilst they are still alive. If we were pressed simply for a categoric answer to the question as to whether such a practice were permissible under proper restrictions, and for the purpose of advancing science and lessening human suffering, we need scarcely say that the answer would be in the affirmative. This reply, however, would fail to indicate our opinion upon the question which is now being discussed. We cannot be supposed capable of doubting the fact, that many important scientific truths have been elicited by means of such investigations upon the inferior creatures; nor that actual practical benefit has accrued from them towards the alleviation and prevention of human misery. Now we know that the occasional infliction of pain may be justifiable for the sake of undoubted permanent good, even as respects man towards man. It has been well said, that to maintain the justice and honour of nations we do not hesitate sometimes to embark in a war which will cause innumerable miseries to our own race. Men have submitted to infinite torture for the sake of some noble or necessary purpose. We still punish a certain class of offenders by the cautious infliction of a much-dreaded physical pain. We have every ground for believing, then, that we are justified in submitting the lower animals to the mode of research under dispute, when it can be reasonably expected that science may be advanced, and practical benefit result to humanity. But this view of the matter does not really bear upon the argument properly before the public. It surely is not called upon to decide the simple question, whether in the privacy and retirement of their own rooms two calm and clear-headed men of science and of good repute may or may not pursue a series of investigations and experiments upon living animals, which inquiries they conscientiously believe may lead to the advantage of their fellow mortals; and in which investigations means are adopted, by the administration of anæsthetics, to entirely deaden the pain caused by these operations. So far from it being the duty of the world at large to settle this question, it is rather scientific men themselves who are called upon to assist the public to see the matter in its proper light. But, in truth, the public deals with another aspect of the affair, and here we side with the public. The latter, it is true, is rather over-sweeping and violent in its argument, but enough has unquestionably come before it naturally to arouse it to indignation, and to cry with a loud voice that its remonstrances may not alone be heard, but likewise be obeyed. The voice which has been talking so loudly affirms that the practice of vivisection and such investigations as are usually implied by it, have spread from the hands of the retired and sober man of matured science into those of every-day lecturers and their pupils. It asserts them to be a common mode of lecture illustration, and avers its belief that a vast number of experiments are made upon living animals which are not only utterly unproductive of scientific or practical value, but attended by exquisite pain to the animals thus made to suffer. Finally, it maintains that the practices common, particularly at the schools of veterinary medicine in France, are disgraceful to humanity, and fit to fire the indignation of all but the most cruel-hearted. How much of all this is true, and how much is common to the schools of France and how much to those of Britain, we will not here stop to decide. We will state our belief, however, that there is too much of it everywhere, and that there are daily occurring practices in the schools of France which cry aloud, in the name both of honour and of humanity, for their immediate cessation. It has been, indeed, these pitiless procedures across the Channel that have immediately excited the present outcry. About two years ago our own Royal Society for the Prevention of Cruelty to Animals became possessed of the knowledge that it was still the practice in the Schools of Anatomy and Physiology of France for the lecturers and demonstrators to tie down cats, dogs, rabbits, &c., before the class to perform upon them operations of great pain, and to pursue investigations accompanied by most terrible torture. This, too, for the purpose only of demonstrating certain facts which had been for long unhesitatingly admitted, and for giving a sort of meretricious or *ad captandum* air to a popular series of lectures. It learned, moreover, that at the Veterinary Schools of Alfort and Lyons live horses were periodically given up to a group of students for anatomical and surgical purposes, often exercised with what might not unfairly be called the extra-refinements of cruelty.

"Veterinary students are allowed to perform a series of operations on a living horse, so graduated in the intensity of their torture, that no less than sixty or more can be performed on the same poor creature, and the wretched animal, with the heartlessness which such proceedings naturally engender, is often left to linger in its agonies after all this mutilation, till the knacker comes in his ordinary round to put an end to its miseries. This atrocious practice has even gone so far that it was quoted as a great relief when it was arranged that the operation of removing the hoof, which causes frightful suffering, should be performed on the living animal only once by each student—namely, on the day of examination."—*The Times*, August 11th.

Mr. SAMUEL GURNEY, the treasurer of the Society, with other members of the Committee, had the privilege of an interview with the Emperor of the French for the purpose of directing his Majesty's attention to the above and analogous practices. They received an assurance that an inquiry should at once be made concerning them. A commission of scientific men was immediately appointed by the Academy of Medicine, pending whose deliberations an *ad interim* order was issued by the French Government, suppressing the operations complained of as taking place at the schools of Alfort and Lyons. From what followed it was assumed that there was a cessation of vivisectional abuses at the French schools generally, a

complete interdiction of them in private houses, and that professors had ceased to undertake experiments upon animals without previously dividing the spinal cord, or taking some other means to deprive them of painful sensibility. It happened, however, that the editor of a journal, the office of which is situated close to the Ecole Pratique at Paris, complained to the police that both himself, the women in the adjacent Maternity Hospital, and, in fact, the whole neighbourhood, were constantly disturbed when the course of physiology was proceeding at the school by the howling and barking of dogs both night and day. The police were attentive, and visited the different rooms of the school, which, "no longer containing subjects, are now filled with living dogs, which are shut up, probably without bread or water, ready for serving their turn at the lecture-room." The police commissary, as the result of his visit, assured the editor that "he would hear no more of it." "What," asked the latter, "are the dogs no longer to be kept in the dissecting-rooms?" "Oh, yes; but it appears that they have cut something in the dogs' necks which prevents them crying." The fact was, the poor animals were now subjected to the painful operation of dividing the laryngeal nerves as preliminary to the performance of other mutilations! And what were these dogs for? Simply for the vain repetition of clap-trap experiments by way of illustrations of lectures for first-year students! These facts becoming known, the general public has at length interfered, and, as we think, with very great propriety. The entire picture of vivisectional illustration of ordinary lectures is to us personally repulsive in the extreme. Look, for instance, at the animal before us, stolen (to begin with) from his master; the poor creature hungry, tied up for days and nights pining for his home, is at length brought into the theatre. As his crouching and feeble form is strapped upon the table he licks the very hand that ties him. He struggles, but in vain, and uselessly expresses his fear and suffering, until a muzzle is buckled on his jaws to stifle every sound. The scalpel penetrates his quivering flesh. One effort only is now natural until his powers are exhausted—a vain instinctive resistance to the cruel form that stands over him—the impersonation of MAGENDIE and others of his class. "I recall to mind," says Dr. LATOUR, "a poor dog, the roots of whose vertebral nerves MAGENDIE desired to lay bare to demonstrate BELL'S theory, which he claimed as his own. The dog, already mutilated and bleeding, twice escaped from under the implacable knife, and threw his front paws around MAGENDIE'S neck, licking, as if to soften his murderer, and ask for mercy. Vivisectors may laugh, but I confess I was unable to endure that heart-rending spectacle."

But the whole thing is too horrible to dwell upon. Heaven forbid that any description of students in this country should be witness of such deeds as these! We repudiate the whole of this class of procedure. Science will refuse to recognise it as its offspring, and humanity shudders as it gazes on its face. And yet, strangely and absurdly enough, we have been quoted, apparently as if approving such heartless practices. In publishing the lectures of various anatomists and physiologists we necessarily detailed the conclusions the investigators had arrived at, and indicated the means which they had pursued. But both conclusions and experiments were theirs, not ours; and both of which possibly might very little accord with what we really approved. It might with as much propriety be said that we acquiesced in all that came out on the late trials of RUSSELL v. ADAMS and BROMWICH v. WATERS because we reported what the witnesses said! But for the present we must conclude. Suffice it now to say, that we are of opinion that whilst under certain circumstances of a very particular character—every precaution being taken to lessen sensibility,—animals yet endowed with life may be justifiably employed for the purpose of physiologic investigations by a few men of science in an almost sacred privacy and retirement, the practice of performing surgical operations on living animals, the custom of repeating the same experiments, and especially the illustrating of ordinary lectures through their means, should be at once and unhesitatingly abolished.

LONDON is out of town! Her squares are deserted and her streets silent; busy thoroughfares invite the attention of the paviors, or call M'ADAM to their aid; the country gentlemen have returned to their homes exhausted by the turmoil of the season; members of Parliament breathe freely, relieved from the duties of the session; circuits coming to a close permit weary barristers for a time to bid adieu to *Fi. Fa.* and *Ca. Sa.* Medical men are suddenly impressed with the propriety of foreign travel; merchants close their ledgers with disgust; and Government officials vote their office a bore. A desire for change influences all. Some become oblivious of the morning shave, and others dissatisfied with the morning coat. The delinquency of the one and the eccentricity of the other together combine to constitute that nondescript known as the English tourist. JOHN BULL determines to see the world, in order that he may freshen up a bit before a renewal of duties and a return to work. It is right that he should have his holiday, and therefore we wish him well, and offer him a few hints to guide him in the even tenor of his way.

We first address ourselves to Londoners special,—

"Those men well-spoken, gravely stout, and wise,"—

who have for the last twelve months been anxiously engaged in the serious business of life, and deeply immersed in the perplexing responsibilities of commerce; who now for a time bid adieu to the countinghouse, and look beyond home for that enjoyment which without intermission they have experienced therein. To such we say, there is a change which is not rest, and a travel that is no relief. The present system of rapidly passing through continental towns, and experiencing every imaginable inconvenience in order to catch a glimpse of

"Countless stores
Of long past thought and dear antiquities,"

has little to recommend it to him whose daily habits have been founded on regular hours, moderate exercise, and comfortable fare. It is not well to thus make a labour of a pleasure. For the middle-aged and robust it is

"Better to hunt the fields for health unbought,
Than fee the doctor for a nauseous draught;"

yet the chances are that some other course will be pursued. Some happy man,—

"——— in seipso totus, teres, atque rotundus,"—

forgetting that sixteen stone is no light weight, and that the balance of power in such cases more frequently rests with the will than in the legs, is this moment preparing for a continental walking excursion, to find himself blown at the end of the first stage, with recurring mementos of his foolhardiness ensured to him for the coming winter. We advise these excursions to be

left to younger men. They enter into the spirit of the thing: chip off, if opportunity offers, characteristic specimens, regardless of the damage; eat and drink of everything, and sleep anywhere, reckless of the consequence; and, above all, engrave the family name in some conspicuous place or other, that posterity may admire the ubiquity of the English. Londoners have enough of cities. Let them seek the fields and woods as places to make holiday in, if not to live in and live with. Yet even there Paterfamilias is not free from danger. It may be that rural sports for a moment engage his mind. Eager to whip the stream where "aiblins there's a transient brute," the wind in his eyes, the water in his boots, but hope, the charmer, lingering in his heart, some untried WALTON, with aching shoulders and chattering teeth, lays in a store of rheumatic and other pains which render his country trip less agreeable than was anticipated, causing him to exclaim with *Touchstone* in the forest, "When I was at home I was in a better place." Perhaps, if his ambition does not so tend, he still feels that, being in the country, a system of unceasing tourage becomes essential. If so, he commits an equal mistake. Sudden and continued exertion on the part of those little accustomed to violent exercise seldom fails to be productive of harm. We know of many instances in which permanent inconvenience has resulted from a want of moderation in such particulars. What, then, is the citizen to do who seeks the country for a change? To give up thoughts of business; to revel in the repose of mind and body which absence of care and regularity of hours ensure; and, while he can, to

> "Enjoy that sweetness in the mountain air,
> And life that bloated ease can never hope to share."

Around him, to study the beauty of nature; above him, to behold the pure unclouded sky; within, to experience that calm enjoyment which city life denies, and for the time at least to realize the truth of such praise as that which perpetuated the cognomen *Frugi* as an honourable addition to the house of PISO—that which old Roman patriarchs so sedulously inculcated when they taught

> "Quæ virtus et quanta, boni, sit vivere parvo."

A complete and perfect change, without undue shock to the habits or system, is that which the Londoner requires; and that England amply affords, in her lakes, mountains, and seaside homes, to the majority of those whose means enable them to enjoy the privilege.

It may be that, like the Frenchman who exclaimed "Pour moi, j'abhorre les beautés de la nature," the Londoner will rather seek the busy throng by the sad sea wave. It is, perhaps, the greater change of the two, more especially if he determine to take advantage of the bathing which his sojourn affords. We presume him to be settled in one of the curious devices termed "marine residences;" to have found a landlady of Spartan integrity, and couches free from those terrible visitors which make night horrible. It is well to remember that even then, notwithstanding such success, some occasion for discretion exists. Many become suddenly impressed with the belief that a sort of amphibious existence was that for which they were designed, and seek for the full benefit of the sea-breeze through hours' indulgence in the delightful waters of the place. This is a mistake. Bathing is to many the source of both enjoyment and health when used in moderation. On the other hand, its excess proves far from beneficial, especially to the large class of middle-aged, whose swimming capabilities are not altogether on a par with those of the Champion. Self-denial in this particular is most desirable, especially as other sources of amusement are not wanting. Here the stranger may enjoy fully itinerant harmony, without any apprehension of BABBAGE. Here the acrobat can indulge in every distortion, to the delight and satisfaction of those around. While the Londoner lounges at his ease and smokes his weed—it may be, a sea-weed—without inquiring whether WORDSWORTH was not dyspeptic when he entered on a crusade against the fragrant herb (which Paterfamilias's firstborn assures those who object to its use has been pronounced by high authority as less injurious than sugar), it matters not much where the change be, provided it be somewhere. *La France* informs us that European affairs are at a standstill, since "sovereigns and diplomatists are everywhere taking holidays; and we must expect a period of suspension in the negotiations." Let all follow their example, and take a holiday likewise.

To those who determine to do the Continent, we have but few words of advice to offer. They are for the most part resolute men. Let them go and contrast "the nutritious nectars" with which they will become familiar in superbly-furnished saloons with the thin potations and sour *vins ordinaires* a misanthropic minister has introduced amongst us; and as in passing through they sip those compounds, concocted by *cacodæmons*, analogous to the "fine crusted ports" and "golden sherries with yellow seal" of our own hostelries, they may learn that *perfide Albion* is at least honest in the matter of beer. Continental hospitality not unfrequently assumes the form of compliments to the traveller, dining at his expense and—in his hotel; and even this is not to be despised, inasmuch as the mysteries of the cuisine become thereby unfolded, and "rosbif Anglaise" for the moment laid aside. Even under such guidance it is well to remember—

> "Dulcia se in bilem vertent, stomachoque tumultum
> Lenta feret pituita."

This, however, is the smallest of evils. So long as cities, with their galleries and gardens—their bridges, hostels, hospitals, and cemeteries—their

> "craggez and stones,
> That maketh pylgrymes weary bonez"—

sharpen the appetite of the sight-seer, his fears of dyspepsia may rest. It is when he attempts higher things that our apprehensions arise—when without preparation he joins the little party in their trip to the Pyrenees, or seeks to shout "Excelsior!" amid everlasting snows. For the literary man who attempts the first with muscles untrained we can only recommend the example of a highly-gifted friend, who broke down on the second day, having deliberately determined so to do, and thereby found a pious beast, the property of a perfect curé, to carry him safely on his way. The Alpine explorer is beyond our ken; cricket and rowing have given him muscles "strong as iron bands," and we leave him to his fate.

What we desire is to offer a few general words of advice to all: to remember that the happy chance of relaxation must not be abused; that discretion in pleasure lends it an additional value; and that the least pleasant reflection of a foreign tour is the

> "Vow made in pain, as violent and void,"

which not unfrequently results from inattention to those parti-

culars which, with a hearty desire for their enjoyment, we have thus set forth.

A few words of special admonition to our medical brethren. They, above all, must not forget that rest and recreation are the objects of their tour. Let them avoid every professional association which has in prospect hospital visits or scientific investigations, and as far as possible divest their memories of those patients and responsibilities they leave behind them. While the members of other learned professions are free, without material loss to them, to withdraw from their labours whenever occasion requires, medical practitioners are bound to their positions, and are for the most part limited to their annual trip. We trust that no mistaken zeal will induce them to commit the great error of maintaining the cares of practice while seeking pleasure, and so perpetuating those anxieties from which they require complete though temporary freedom.

SEWAGE is a provoking paradox, or rather it begets many paradoxes. It is a thing to be most earnestly rejected, and yet as ardently retained. A most noxious refuse, it is also a most precious fertilizing agent. To the uneducated senses it is a commixture of whatever is revolting; to the educated, a combination of much that is gladdening. Its fumes prompt equally visions of a halo and an ailing community. To the sanitarian they are significant of horrid and agonizing cholera, fatal typhoid, exhausting diarrhœa, untold infirmity, and a redundancy of pauperism; to the scientific agriculturist, of unstinted crops, of barren lands made prolific, of brimming abundance, and of wide-spread prosperity. That which to one is an emblem of corruption and decay, to the other is indicative of renovation and vigour. That which the one would cast out and cover from the sight, buried deep in the earth, or thrown into the running streams or into the sea, as most pernicious, the other would treasure up as most beneficial. Where the one sees a chief source of vital waste, the other sees a chief source of vital gain. And yet both are consistent in their very inconsistencies. Both are right; and what is required is to show in what manner the most serviceable properties of sewage may be secured, while its pernicious effects are avoided.

It is not sufficient to conjure up visions of the fertilizing powers of sewage, or of the pecuniary loss suffered from permitting it to run to waste—a loss which, if the estimates are to be relied upon, might well have excited the envy even of the possessor of ALADDIN'S lamp or of the purse of FORTUNATUS. Little does the adventurous Cockney imagine, when tempting the dangers of the Thames on a voyage to Erith or Gravesend, that the murky cascade falling into the river at Barking, and which he innocently imagines to be river water pumped up from excavations in the rear, is a stream richer in gold than the most auriferous mountain current of the Far West. But so it is. It is bad enough to have polluted the Thames to the utmost limit of human endurance; but, alas! the very source of pollution might become a source of wealth to be reckoned at hundreds of pounds sterling per day, thousands per month, and tens of thousands per year! In truth, it is averred that, at the present moment, we are ingeniously sinking, in the metropolis, three millions to effect a yearly waste of one million or more! Strange paradox, but not less strange than true, yet false in its very truthfulness. It is true that the sewage of the metropolis as a fertilizing agent is wasted, if by that term is simply meant that it is lost; but it is not true, as is sometimes implied, that it is wantonly wasted. It is not true, moreover, that either local governments or the public are indifferent to or neglectful of the fertilizing properties of sewage; but it is true that sewage-utilization-mongers too commonly show a magnificent disregard of common sense in the projects with which they are apt to recreate the risible and nauseate the sedate. Let it be admitted, with LIEBIG, that if the daily sewage of the metropolis were duly physicked with 100 tons of superphosphate of lime it would be equal in fertilizing value to 247 tons of Peruvian guano. Admit also that the sewage is far richer in that much desired and least easily obtained manure, potash, than guano, and is, therefore, in so far, deserving of higher regard. Reckon, also, with the same great chemist, the yearly value of the metropolitan sewage, deducting the cost of the superphosphate of potash requisite to educe its full fertilizing efficacy—but *not* the cost of preparation and distribution—at £1,009,006. In what manner do these ingenious estimates aid to solve the simple practical question which *now* concerns Londoners, whether the fertilizing constituents of the sewage can be recovered, and can be as readily dealt with in the market and distributed from place to place, and at as little cost, at the most, as guano? Until this question is solved (and for the solution of it the nation has been patiently waiting for several years, and is prepared to wait patiently several years longer) it is worse than idle to promulgate vain imaginations, in which by a "judicious" use of the sewage of our towns and villages an agricultural revolution is promised, and England rendered independent of all other lands for food. A charming and most desirable prospect truly, but, failing the simple practical method of effecting the preliminary step in this great change, a delusive dream. Who could over-estimate the influence which would be exercised on the prosperity of Germany if the vast aggregate of gold which is mingled with the sands of the Rhine were raised? But unhappily in this very raising rests the rub. No doubt it is well, in order to induce practical efforts in an untried direction, or to impart energy to such efforts, to portray their probable beneficial results, but it is advisable to restrict the portraiture to the practical and probable rather than the possible.

Having regard to the feats of sewage-utilization projectors, it would almost seem as if sewage exercised some special and haschish-like effect upon the imagination. Or it may be that the difficulties of the problem to be solved so nearly approach to the insuperable, that the imagination alone is equal to the task of overcoming them. It might have been thought that, in the case of the metropolis, the question of rendering available for the farmer a daily sewage-flow of some fifteen million cubic feet would have satisfied the most capacious practical imagination, if, indeed, the vastness of the amount to be dealt with did not sober it. But, as the Metropolitan Board of Works know to their cost, this is far from being the case. It is not a little gratifying to find, however, that in the recent attempts of the Board to effect a sale of, or to secure some reasonable and practicable plan of recovering, the valuable elements of the sewage, the hundred and odd projectors of five years ago should have dwindled down to nine. But, alas! these nine have profited little by the fate of their predecessors. All agree in setting forth the enormous value of the sewage as manure—a value to be estimated, according to the fancy of the reader, at from £1,000,000 to

£5,000,000 per annum—but one only has sufficient confidence in the realization of this value as to offer to purchase it, and he offers a modest minimum rental of £10,000 a year! One gentleman, quietly ignoring the primary object of an efficient drainage, the sanitary condition of the population, and the works at present carried on, proposes to reconstruct the water-closets of the metropolis, and introduce a new special system of pipes, by which the most valuable portions of the sewage might be separated and preserved from the outset. He estimates the cost of these works at about a million and a half, but he promises a net profit of one million. Another gentleman offers a mild suggestion, but makes no proposal. A fourth is wishful to have the sewage delivered to him for ninety years, the first fourteen at a peppercorn rent; or he is willing to pay one farthing for every ton of sewage raised by the Board to a height of 200 feet. A fifth (a co-partnership) would be glad to have as much sewage as he might require at Barking for two years, as an experiment, at a rent of £5. A sixth requires a concession of the whole sewage for fifty years, without let or hindrance on the part of the Board, offering to pay half the net profits after deducting seventy-two per cent. for invested capital. A seventh proposes to distribute, by gravitation, the liquid sewage over a prescribed area through pipes, so that it may be as convenient of access to the farmers as water to a householder in town. He requires a concession of the sewage in perpetuity, and offers half the net profits to the Board, with power to purchase after fifty years. A preliminary step in this scheme would be pumping the sewage up to covered reservoirs on Hampstead-heath on the North, and Shooter's-hill on the South. An eighth would convey the Northern sewage forty-four miles away and endeavour to recover some 15,000 to 20,000 acres of ground at present submerged at high water. A ninth (a co-partnership) decline to make public their scheme, but are willing to discuss it privately with the Board. Not one of the proposals fully complies with the requirements of the Board; not one attempts to offer a plain practical solution of the question how to make the metropolitan sewage—as about to be collected—a marketable article; or, this being impracticable, endeavours to show that on public grounds the Board would be justified in undertaking the responsibility of recovering and distributing the sewage apart from commercial considerations. Whether the Metropolitan Board of Works will be induced to look with favour upon any one of the nine proposals laid before them we cannot presume to judge. But if any additional justification were required of the wisdom of the Board in carrying out a system of drainage entirely independent of projects for the utilization of the sewage, it may be found in the recent batch of schemes. If the sanitary considerations which have hitherto determined the drainage arrangements of our great towns were to be made subservient to sewage-utilization, our town populations would fare ill. Until it is shown in what manner the sewage of large towns can be rendered a profitable marketable commodity, the former considerations can alone justly influence the deliberations of local governments on drainage questions.

GUY'S HOSPITAL.—The Peruvian minister has sent £50 to the superintendent of this institution, to be employed for the relief of patients on their discharge, and as "a slight mark of the deep gratitude which the Government of Peru will always entertain for the generous assistance afforded by the Hospital to their infirm soldiers and seamen."

Medical Annotations.

"Ne quid nimis."

THE LATE LORD CLYDE.

THE sad illness which has robbed the country of one of its noblest heroes undoubtedly arose from the toils and hardships of his soldier life. It was no mere "atrophy" of the frame, such as enervating old age brings to the idle as to the bold in arms; and it is just that we should say it, for it seems only to add another though a mournful claim to our tender reverence and high regard for this simple-hearted and devoted soldier, to know that in his death he paid the debt of injuries self-inflicted on his health by hard service to his country. Lord Clyde was naturally of a very vigorous constitution, and immense chest development in proportion to his height. During the Indian mutiny campaign in Oude, he was thrown violently from his horse, dislocated his right humerus into the axilla, fractured a rib, and suffered afterwards some inflammation, both pleuritic and pneumonic. He never felt thoroughly well since that accident. After his return to England he had two or three attacks of congestion of the lungs, associated with bronchitis and enfeebled action of the heart. One of these attacks preceded his late fatal illness. During his last sickness he was attended by the medical officers of the Chatham garrison, Surgeon-Major Summers (Royal Engineers) being, we believe, in immediate medical charge, assisted by a daily consultation with the principal medical officer and others. Prof. Longmore, Mr. Cutler, and Dr. Watson paid some visits during the course of the illness.

Their opinion pointed but too clearly to the fatal result. The chief symptoms indicated fatty degeneration and dilatation of the heart, but without any apparent valvular disease; imperfectly aërated blood, and consequent disturbance of the brain and mental functions, œdema, with orthopnœa, and restlessness: these were the sure forerunners of the end. And, in fact, the disease consisted of general enlargement as to weight and bulk of the heart, fatty degeneration, and dilatation of the auricles. It was obvious that the duration of the disease was upwards of two years. Lord Clyde died, not from the wasting atrophy of age, but as directly in the service of his country, and from the weight of the heavy toils and great blows which he bore in that service, as though he had fallen on the very field of one of those battles in which he so often led to victory.

SURGEONS IN COURT.

IN numerous cases recently tried, members of the profession have been called upon to give their aid to justice, and by their evidence have rendered important services; for prate as the lawyers will about the fallibility of medical experts, yet in all issues of life and death they fall back upon that aid, which is powerful as the labours of great intellects through long centuries can make it.

In the case of Russell *v.* the Midland Railway Company a question arose upon which the opinions of three London surgeons and others from the provinces were taken. The plaintiff had sustained an injury to the arm by a railway accident, and the question was as to the extent of the injury. Mr. Erichsen and Mr. Partridge were the chief witnesses for the plaintiff; Mr. Lawrence and Mr. Paget of Leicester for the defendants. But there was really little difference of opinion amongst them, although in some of the journals that discrepancy is obviously dwelt upon and, as it were, magnified. All were agreed that the fibres of the deltoid had been ruptured; and the question was, whether the stiffness of the shoulder-joint of which the plaintiff complained was real and *bonâ fide*, or whether, and to what extent, it was simulated. This was of course a matter of opinion. Only one test could decide it—namely, the adminis-

tration of chloroform; and this probably the patient declined to undergo. Mr. Partridge and Mr. Erichsen, who were for the plaintiff, thought he was not malingering; Mr. Lawrence, who was engaged for the Company, thought he was. Probably there was here a little of the "unconscious bias of the mind" of which Lord Chief Justice Cockburn spoke the other day in addressing the medical students of St. Mary's Hospital, and which, as Professor Faraday showed the world, is not peculiar to any profession, and is strong enough not only to impart a gentle colouring to the thoughts, but unwittingly to guide the fingers in the manipulation of mahogany dining-tables. It is to be regretted that we cannot construct dials for the mind such as be attached to the finger-plates, so as to indicate and register the force of this unconscious bias when it is at work. This case was plainly open to two interpretations, and the decision was just "a matter of opinion." The question was as much one of morality as of medicine; and probably opinions were as much guided by watching the muscles of the face as the muscles of the shoulder during the examination.

A second case—that of Leete *v.* Stogdon, tried at Bristol—illustrates the great importance of direct medical examination. The action was for slander, the declaration alleging that the defendant had asserted that he had had carnal intercourse with the plaintiff, whereby she had been treated with less kindness by her friends, &c. The plaintiff and the defendant were engaged to be married; but the match was broken off owing to the drunken habits of the defendant. He in revenge cast imputations on the chastity of the plaintiff; and when action was instituted, pleaded the truth of his allegations. The defendant swore positively to having had connexion with the plaintiff on several occasions; and called in confirmation of his statements a labourer and a servant, who deposed to having seen the plaintiff and defendant several times in situations which, *if true*, left no doubt as to intercourse having taken place between the parties. The evidence of Dr. Brent established beyond question that there was no foundation for the statements made in reference to the plaintiff. His careful examination enabled him to speak with confidence as to her virtue, and thereby established the perjury of the defendant. The jury found a verdict and damages for the plaintiff. Mr. Justice Willes, who heard the case, severely commented on the defendant's conduct, and declared that if the Criminal Court were then sitting he would have at once committed him for trial for perjury. He called on the defendant to enter into recognizances for £200 to appear at the next Gloucester Assizes to answer any charge which might be preferred against him.

The facts of this case place the value of the medical testimony beyond question, and they also afford an illustration of the utter recklessness with which the evidence of partizan witnesses too frequently is given. We have had occasion to comment on the disastrous results which have followed the reception of testimony from those of questionable reputation where charges affecting character are advanced. The case now before us is but the most recent illustration of the system pursued on many trials which have involved the best interests of members of our profession. We rejoice to feel that medical science was effective for the complete vindication of the plaintiff's statements and the perfect exposure of the groundless nature of those base charges ordinarily so easy to advance, and so difficult to an adequately refute.

ARMY MEDICAL NEWS.

A MEMORIAL has, we understand, been forwarded from some of the army medical officers doing duty in India, to H.R.H. the Commander-in-Chief, praying that the same privilege of effecting mutual exchanges may be conceded to them as is enjoyed by the combatant officers of the army. We know not what the reply may be, but the responses from that authority to the representations of the military medical officers have usually been absolutely and sharply negative. Lately a direct refusal was given to a memorial from all the oldest and most distinguished medical officers of the British army, pointing out—what we have several times commented on—the hardship of the present excessively long period of service, and asking for the simple and well-earned boon of an earlier retirement. This was peremptorily refused, although powerfully backed.

The medical officers of the army feel indeed, more than ever, that they are systematically ill used; and if there is a gleam of hope for the Indian medical service, as we last week announced, in the new Indian Medical Warrant which is in course of preparation, it is to the Indian Government that they owe it. For the Secretary at War at present shows but too ready a complaisance to that influence which overbears the just claims of medical interests and the true welfare of the soldier, which is bound up with the efficiency of the sanitary and therapeutic provision for his care, so seriously endangered by present dispositions. The money details of the new Warrant are wholly an Indian Government affair; and they are said to be so liberal, and in the regular turn of duty the medical officers of the general service will in future have to pass so much of their time in India, that it seems probable the Indian staff will monopolize all the candidates, if the general service continue so unpopular as at present.

Meantime the great dearth of candidates for army medical commissions has evidently attracted serious attention, from what we hear at certain of the London and Scottish schools of inquiries addressed to the leading teachers from influential quarters as to the state of feeling amongst their students, and their absence from such competitions. The replies to these questions will, we earnestly hope, show how certainly the department is being pushed down the sloping decline of unpopularity to absolute inefficiency. The self-respect of the students has effected thus much already; and if in this they have only shown a due sense of their own worth and a just regard to their own honour in declining to enter a service in which neither is at this moment properly appreciated by the authorities, they have also conferred a great favour on their fellows who have, under delusive promises, been drawn into the service. When Lord Herbert and Mr. Alexander resolved to put the medical officers barely in that position of respectability and efficiency which the welfare of the soldier demanded, they were met by a crowd of candidates of excellent quality, who would have filled the ranks of the service twice over. Now it is far otherwise. The thinned ranks of a department pared to the quick by recent economies cannot be filled even by a ragged army of recruits such as *Falstaff* might reject, but which the military authorities would now welcome, if they could thus starve the department into the submissive silence of despair. But we have given too loud utterance to their voice. It has been heard in every school; and the students, warned in time, and cognizant of the state of affairs, have turned their energies into other and more tempting fields. This is deeply felt; for it is palpable that if a war were to break out at this moment, the present depression of the department has told upon it so fatally that it would be impossible even to raise it to a peace complement, which it is now below, without making great concessions. And concessions must and will be made.

HUNTER AND BELL.

A REMARKABLE passage from the later writings of Sir Charles Bell has been recently quoted as affording a very strong argument against the study of experimental physiology in living animals. It is, indeed, singular that this great man, who was not altogether free from the weaknesses of lesser men, did in his later days allow himself from various causes to undervalue the very means by which alone his discoveries in the nervous system were effected. It was solely by the observation of the effect of experiment on living animals that Bell discovered the truth, so far as he arrived at it, concerning the separate functions of nerves of motion, general sensation,

and special sense. So far as anatomy could go, he had already been preceded by the illustrious John Hunter, who, in his tract "On the Nerves which supply the Organ of Smelling" in his celebrated work "On the Animal Economy," has distinctly pointed out, with all the certainty which anatomical inference could give, the distinctions between the functions of the olfactory and the fifth pair; and intimated that as both eye and ear "have nerves belonging to them simply as a part of the body and not as the organ of a particular sense," so in the nose "we shall find a nerve which we may call the peculiar nerve of that sense; and the other nerves of this part, derived from other origins, only conveying common sensation, and we may suppose only intended for the common actions of the part." The illustrious exponent and successor of Hunter—Professor Owen—long since pointed out the great insight to the truth which this tract indicates; and on this point we may refer to Owen's preface to the "Animal Economy" printed in Palmer's edition. The question is one of great scientific interest, but on which no doubt can exist. Hunter stood on the threshold of Bell's discoveries, but never passed it. He went as far as anatomy could carry; Bell advanced further, and confirmed what was before only inference by demonstrations on the living animal. The work which Bell left incomplete Brown-Séquard has prosecuted with singular success by continuing in the path of experimental research. Let no man ignorantly cast obloquy upon labours which, although pursued at the cost of some pain to lower animals, have had the most momentous effect upon the healing art, and unveiled to us mysteries of the frame that had till this century been buried in darkness, and which have served the cause of humanity hardly less, if at all less, than the great discoveries of Harvey and of Jenner.

A VOICE FROM ALGIERS.

THE unusual prevalence of rain during the last winter season at Algiers created a very unfavourable impression in the minds of the many invalid visitors who had been attracted thither by the reports of the generally mild and agreeable character of this season at that place. They left, therefore, earlier than usual, carrying with them feelings of disappointment which they have not failed to express in Europe. The consequence has been, that many of the leading physicians here and elsewhere have been writing to Algiers on the subject, and requesting more precise information. Dr. A. Bertherand, the leading physician there, has drawn out a statement in reply to such queries, which has been addressed to us for publication in this country, and has been forwarded to us through the polite care of Dr. Burrows, of St. Bartholomew's Hospital. It is a document of much importance to the inhabitants of Algiers, and of interest to phthisical invalids especially, as well as to their medical advisers.

It must be acknowledged (he says) that the winter season of 1862-63 at Algiers was marked by an unusually prolonged continuance of rainy weather and high winds. A very unfavourable impression has consequently been produced on the visitors who, in greatly increased numbers, allured by the renown of its mild and pleasant winters, resorted thither for pleasure, or for relief from sufferings engendered or aggravated by the inclemencies of more northern regions. Bitter complaints of disappointment in this respect have been made to the medical men at whose suggestion Algiers was last year chosen as a winter station in preference to other places of older repute; and anxious inquiries are made by members of the profession in various parts of Europe for precise information as to the meteorological modifications which are alleged to have so changed the climate of Algiers that the descriptions hitherto given of it can no longer be regarded as true. In reply to such inquiries, the following remarks, based upon authentic meteorological and statistical observations, are offered as the only effective means of correcting the erroneous impressions produced by the utterance of opinions founded on individual experience. It is hoped, for the sake of Algiers no less than of its invalid visitors, that they will serve to remove the above-mentioned doubts as to the actual character of the Algerian climate:—

1. From the observations of MM. Don, Bourget, and Humbert, tabulated for a period of seventeen years by Dr. Mitchell in his pamphlet on "Algiers and its Climate," it appears that the mean number of wet days for the wet season—i.e., from November to April inclusive—is 72; whereas last season the number was only 60.

2. From the same observations for the same period of the year, the mean quantity of rain which fell was 738·5 mm.; whilst for the same period in the winter of 1862-63 the pluviometer showed only 683 mm.

3. The order of the months in the last season according to their number of rainy days is as follows: November, 16; January and March, 10; December and February, 9; October, 8; April, only 7.

4. Last winter was characterized by a degree of inconstancy in the weather which was very peculiar, and ought to be noticed. The meteorological register for the period shows for—

November,	20	days cloudy or variable,	against	10	fine
December,	16	,,	,,	15	,,
January,	9	,,	,,	22	,,
February,	12	,,	,,	16	,,
March,	14	,,	,,	17	,,
April,	13	,,	,,	17	,,
	84			97	

Showing for the whole season a proportion of 7 cloudy days for 8 fine.

5. As regards the mortality: under the sole class of affections of the chest from November to April inclusive for the entire population, the tables of mortality for the last four seasons give the following figures:—

1. Deaths from bronchitis, pneumonia, pleurisy, &c.:

Winter of	1859-60	...	...	169
,,	1860-61	...	...	167
,,	1861-62	...	...	142
,,	1862-63	...	...	158

2. Deaths from confirmed phthisis:

Winter of	1859-60	...	...	110
,,	1860-61	...	...	73
,,	1861-62	...	...	85
,,	1862-63	...	...	101

3. Deaths from thoracic affections of all kinds:

Winter of	1859-60	...	...	279	Average, 251
,,	1860-61	...	...	240	
,,	1861-62	...	...	227	
,,	1862-63	...	...	259	

From the foregoing tables it appears—1st, that the deaths in the season 1862-63 were fewer by 20 than in that of 1859-60, which last, however, was considered to be extremely favourable to invalids; and, 2nd, that notwithstanding the greatly increased number of such visitors in 1862-63, the deaths exceeded by only 8 the average of the last four seasons.

6. The hospital registers, and the results of our daily practice and frequent conversations on this subject with fellow-practitioners, alike give us the dominant pathological character of the season—influenza and bronchitis, alternately or together, but rather obstinate than severe. It is worthy of remark also, and confirmative of the foregoing opinion, that whooping-cough and croup were less fatal at Algiers last winter than in the preceding ones.

The relative ozonometric indications for the last two seasons are as follows:—

	1861-62.	1862-63.
Maximum	9	8·8
Minimum	1	3·0
Difference	8	5·8

Whence it appears that the mean ozonization of the atmosphere in 1862-63 underwent less variation than in the preceding winter season.

The invalid visitors have almost all suffered, in much greater degree than the acclimatized residents, from influenza; but—and this is the most remarkable fact of the season in a medical point of view—the cases of active and advanced phthisis, those precisely for which we persist in declaring most emphatically that the climate of Algiers is unsuitable, were less affected by the humidity prevalent through the last winter than by the *heat* and *dryness* of the two preceding ones. That on which our climate exerts most powerfully its remedial influence is "pneumophymie" in its torpid, incipient state, and especially the tendency to such a state.

It follows from the foregoing observations that, although the winter season of 1862–63 at Algiers was less agreeable to invalid visitors, its comparison with former winters does not sanction the supposition of any change in the climate of the country. Once before we had occasion to protest against a similar imputation equally ill-founded; and now as then,—whilst making every allowance for the disappointment and vexation of those for whose condition of health sunshine and out-door exercise are so incontestably needful, and to whose recovery these influences are such powerful aids,—we are bound to declare that, notwithstanding the meteorological peculiarities of the winter season of 1862–63 in this place, no change has occurred in the established remedial character of the climate of Algiers.

INDECENT BOOKS.

WE have recently had forwarded to us several pamphlets of a most exceptionable character, chiefly advertisements from those degraded practitioners who, outside the pale of the profession, live by the iniquities of the age. It is not our intention to give them publicity, except when they bear the name of a recognised member of one of the Colleges under the control of the Medical Council. It is very much to be regretted that publications abounding with flagrant indecency, couched in terms of the lowest sensuality, should under the name of science be permitted a circulation. Unfortunately Lord Campbell's Act was not devised to meet the issue of quasi-medical works. So long as a publisher is sufficiently reckless of character to place his name on their pages, the author is invested with such protection as infamy can derive from the inefficiency of the law. We doubt not that the Medical Council will yet be endowed with powers to prosecute those who assume the title of "graduate in medicine and surgery" for the purpose of pushing the sale of such works. At present the possessor of foreign degrees, so long as he does not falsely pretend to be a registered practitioner, is at liberty to do so and to practise, but not entitled to recover fees. In the majority of such cases the degrees are purchasable distinctions procured in the foreign markets, and their possessors but little removed in mental or moral constitution from those spermatorrhœal imbeciles on whose vices and follies they batten.

Our attention has also been directed to the advertisements of herbal doctors and professional bone-setters by members of the profession anxious to know if for the prevention of their practices the Medical Act does not provide. For these purposes we regret to say that the Medical Act is not operative. In all legislation something must be left to the good sense and common discretion of the community. Those who place themselves under such treatment must be prepared to run certain risks; and those who undertake responsible duties without that protection which the law casts around the duly-qualified members of the medical profession must be always ready to answer for that rashness whenever anyone aggrieved may think proper to invoke the aid of the law.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The Library and Museum of this institution will be closed on and after Tuesday the 1st of September until Thursday the 1st of October next, in order to allow of the necessary dusting and cleaning.

Correspondence.

"Audi alteram partem."

EMPHYSEMA OF THE ORBIT.

To the Editor of THE LANCET.

SIR,—A case of the above description has recently come under my notice, which is somewhat remarkable, and I think deserves recording. I believe similar cases are very rare, and consequently interesting; but, as far as my reading goes, I have seen no account of any presenting *all* the features detailed below.

J. R——, aged seventeen, a shoemaker's apprentice, and of healthy appearance, ran into my surgery on the 17th of June last in a state of great alarm. He stated that a moment before, when violently blowing his nose, his eye seemed to come "quite out," and that he was suffering great pain and was unable to open it. The patient presented a strange appearance, having a tumour the size and shape of a small orange over the right eye. On examination I found the eye protruding quite half an inch from its normal situation; there was great emphysematous swelling of both lids, extending somewhat beyond the bony margin of the orbit, and total loss of sight from tension on the optic nerve. The puncta lachrymalis and the adjoining folds of mucous membrane protruded beyond the lids in a pap-like form, and the skin covering the affected region was of a pearly, semi-transparent whiteness.

The effused air appeared so very superficial, from the thinness of the integuments, and the tension so great, that I made several small punctures, from which, with very slight external pressure, a quantity of bloody froth was expelled, greatly relieving the pain and abating the swelling so much that he could open the eye slightly. My after-treatment was very simple: I gave a brisk purge, and applied cold lotions. He continued to improve rapidly, and in a few days I lost sight of him until I encountered him by accident, and found no remains of the mischief, though he says he still dare not blow his nose, for at the least attempt to do so he feels all the symptoms returning. It was not until after repeated questioning he remembered that on the previous night he had a very slight slap on the opposite temple from the open hand of a boy with whom he was boxing.

I believe Mackenzie records two or three cases following severe blows over the region, and consequent injury to the bony structures about the duct; but as far as I recollect, there was not the pushing forward of the eyeball in any one of them to the extent I have described. It seems most improbable that so slight a blow so far away from the seat of injury could have been the cause, and I see no other way of accounting for the accident but by supposing there has either been an arrest of development of some of the complicated osseous structures entering into the formation of the air cells adjoining the orbit, or some other congenital malformation of the lachrymo-nasal apparatus, though none is externally visible.

I should be glad if any of your correspondents could inform me of a similar case. My professional brethren in this neighbourhood agree with me in thinking that it differs from any on record. I am, Sir, your obedient servant,

C. BLENCOWE N. DUNN, M.R.C.S.E.

Crich, Derbyshire, Aug. 1863.

JUMPING FROM A RAILWAY TRAIN.

To the Editor of THE LANCET.

SIR,—The following case may, perhaps, be worthy of insertion in your valuable and scientific journal:—

J. A——, aged thirty-three years, a deserter from the 26th Regiment, being conveyed in custody from Luton to Gosport, by the South-Western Railway, got free of his manacles and jumped from the train whilst at full speed. He was conveyed to the infirmary of the Hartley Wintney Union in a state of collapse, and apparently dying. Upon examination it appeared that he had sustained the following injuries:—An extensive scalp wound, fracture of two ribs, fracture of the coracoid process of the scapula, contusion of the right ankle and right shoulder, and lastly, compound and comminuted fracture of the left leg, a little above the ankle, with extensive laceration of the soft parts and of the interosseous ligament nearly up to the knee-joint. On the first aspect amputation seemed the only course to follow; an attempt was, however, made to preserve

the limb by placing it on a Macintyre splint, where it was kept six days, at the expiration of which time unmistakable symptoms of gangrene manifested themselves, and the limb was necessarily removed, by the flap operation, below the knee. His nervous system was so depressed by the shock, that for the first week it seemed likely he would succumb; he was, however, supplied with port wine and brandy almost *ad libitum*, and, thanks to his fine, strong, healthy constitution, he is now quite well of the operation and all other injuries, moving about upon crutches, at the expiration of a month.

The above case shows the dangers attendant upon a leap from a train at full speed, and the extensive injuries the human body may sustain and yet recover.

THOMAS A. FREEMAN, M.R.C.S.

Bracknell Lodge, Hartley-row, Hants, August, 1863.

THE MEDICAL PROFESSION AND LIFE ASSURANCE OFFICES.

To the Editor of THE LANCET.

SIR,—Noticing in one or two of your late numbers communications as to the conduct of the Norwich Union Life Office to medical practitioners from whom it seeks information by a series of medical questions without offering to pay for the answers, I enclose you a part of an application which was made to me a few days ago by the Consolidated Assurance Company, named therein very properly, as you advised, an *assurance* one. The other part consisted of a series of questions in general terms, asking information as to the health of a party named in it who was stated to have referred to me. It was headed in large letters—"PRIVATE FRIEND'S REPORT"; but as the proposed insurer was known to me only as a patient, I could not do otherwise than return it, stating that if they wanted medical information they would have to do as all respectable companies do, and pay the usual fee for it.

I am, Sir, yours &c.,

August, 1863. M.D.

P.S.—I do not observe that the premiums are any less than in other offices, so that the Consolidated Assurance Company, 45, Cheapside, London, E.C., can afford as well as its neighbours to do what is right, if such an argument were required.

LONGEVITY AT LOWESTOFT.

To the Editor of THE LANCET.

SIR,—Having occasion recently to visit Lowestoft, in Suffolk, I examined, according to my usual custom, the ages recorded on the gravestones of its principal cemetery, in order thereby to ascertain whether the district was remarkable for the longevity of its residents, and hence might be considered salubrious. The following is a summary of the figures then collected:—

Age.	Men.	Women.	Total.
75 to 80 ...	51 ...	71 ...	122
80 to 85 ...	46 ...	50 ...	96
85 to 90 ...	16 ...	33 ...	49
90 to 95 ...	7 ...	10 ...	17
95 to 100 ...	1 ...	4 ...	5
	121	168	289

From the above statement venerable females always predominated, although the eldest person was a man who died at the age of 100, while two women were 99, and one in her 97th year. It may be added, in corroboration, that a lady is now living at Lowestoft who will enter her 104th year next month. Therefore, if contrasted with various towns on the sea-coast, this marine and much-frequented abode during autumn may be deemed healthy, speaking generally, seeing that it occupies a really high position in the mortuary scale of its inhabitants.

I remain, Sir, your obedient servant,

Brook-street, W., Aug. 1863. JOHN WEBSTER, M.D., F.R.S.

PARISIAN MEDICAL INTELLIGENCE.

(FROM OUR SPECIAL CORRESPONDENT.)

THE thermometer has been higher, and the river Seine lower, for the last fortnight than had ever, during the present century, been the case. The health of the town has been somewhat disturbed in consequence, and the authorities no less disturbed, lest the town should be made aware of its own exact sanitary condition. One of your contemporaries has got into the black books of the Home-Office for an article on the subject, and has experienced an angry tug from the official check-string. "Your number of the 11th," says the communicated note, "contains erroneous details relative to the diseases which now prevail in Paris, both in the hospitals and private houses. Diarrhœa and dysentery are habitual at this time of the year, when the heat is extreme, on account of excess in drinking and from the use of fruit. The cases which have occurred have nothing of an abnormal or alarming character. Isolated cases of cholera are to be met with every year; up to the present time only two have taken place, evincing nothing of an epidemic tendency. With regard to typhoid fever, many cases have occurred, but it is incorrect to say that they are of a dangerous character; on the contrary, medical men agree in affirming the mildness of the disease on the present occasion. At the Hôpital de la Riboissière, where the writer of the article has found a rate of mortality of fifty per cent., out of 133 patients treated for fever, there have been only five deaths. It is to be regretted that a journal which has the means of being well-informed should publish statements of a nature to cause uneasiness in the public mind, without verifying their exactitude."

In examining several of the points connected with the yellow fever and its supposed causes, M. Melier called attention to a fact which is highly interesting and suggestive—namely, that the malady more generally rages in those parts round which the phosphorence of sea is most prevalent. M. Melier likewise pointed out a fact noticed first by M. Lancereaux—namely, that the pathological lesions observed in yellow fever are exactly those of phosphoric poisoning, and that the greater part of those persons who have died from the baneful effects of phosphorus have presented the very condition of liver considered as characteristic of yellow fever.

A paper on cutaneous absorption, by M. Parisot, was read at the Academy of Sciences, on Monday last, by M. Claude Bernard. The conclusions which are established by the researches of M. Parisot are—1st, that salts such as iodide of potassium, chlorate of potash, yellow prussiate of potash, sulphate of iron, as well as the colouring matters of rhubarb, dissolved in water, are not in any way absorbed into the skin, even after two hours' immersion, for not the slightest trace of their presence can be found either in the urine or in the saliva, by which they are generally eliminated, and in which they may usually be found when they exist at all in the system. 2nd, the poisonous vegetable alkaloids, digitaline and atropine, in solution are likewise not absorbed into the skin, for a prolonged sojourn in a bath containing a strong dose of these substances does not give rise to any symptoms of poisoning.

The vine-labourers in the South of France having for some time been suffering from a peculiar form of ophthalmia differing in some respects from those forms with which we are familiar, the medical men of those districts have been able to trace the evil to the employment of sulphur for the prevention of vine-disease.

Paris, August 18th, 1863.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on the 13th inst.:—

Coates, Frederick William, Salisbury.
Davies, William Thomas, York Town, Surrey.
Dawson, Edward, Manchester.

The following gentlemen also on the same day passed their first examination:—

Vipan, William Henry, Guy's Hospital.
Watson, James Burwood, University College.

During the past year (1862-63) 464 candidates have presented themselves at the Hall for examination in the science and practice of medicine.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH: DOUBLE QUALIFICATION.—The names of the following gentlemen were inadvertently omitted from the list published last week of those who passed the First Professional Examinations for the double qualification of the Colleges at the recent sittings of the Examiners:—

Bateman, Daniel Frederick, Cork.
Hamilton, Alexander, Falkirk.
Handyside, Arthur, East Lothian.
Miller, Alexander Hunter, Edinburgh.
Roberts, George Orlivy, Edinburgh.
Stewart, Francis McBean, Dundee.

THE ROYAL HOUSEHOLD.—The office of Surgeon to Her Majesty's Household has become vacant by the death of Mr. Charles Henry Phillips.

SUICIDE OF A NAVY SURGEON.—We regret to learn that Dr. Galbraith, medical officer of the *Sebastopol*, lying at Canterbury, New Zealand, has committed suicide during a fit of delirium tremens.

LONGEVITY IN IRELAND.—Amongst the 5,798,967 persons enumerated in Ireland at the census of 1861, no less than 742 are returned as being of the age of 100 years and upwards. 278 of these aged persons were men, and 464 were women.

LUNATIC ASYLUM AT ENNIS.—A new lunatic asylum is about to be built at Ennis, at an estimated expense of £29,000. The space enclosed is forty acres, five of which will be covered by the building. This is a hint for the governors of Bethlehem.

EXPLORATION OF CENTRAL AFRICA.—D. H. Steudner, one of the staff of the German expedition to Central Africa under Baron Henglin, has died of fever after having passed through the dangerous miasmata of the morasses of the White Nile.

CHELSEA HOSPITAL AND ASYLUM.—The retirement of Dr. Maclachlan as Principal Medical Officer of Chelsea Hospital, in consequence of severe illness, and which is much deplored by those with whom he has been in connexion many years, has led to the amalgamation of the duties of the medical staff of Chelsea Hospital with those of the Royal Military Asylum.

THE SUEZ CANAL COMPANY.—The sanitary, medical, and pharmaceutical service is installed over an extent of 165 kilometres. Seventeen physicians and druggists have to superintend the health of 36,000 individuals; 4320 invalids have been under treatment in the course of the last term (?) without counting numerous consultations. The expense for each invalid has not exceeded fifty francs. The European Hospital of Alexandria is available for patients who require a change of air.

DEATH FROM CARELESS DISPENSING.—An inquest has recently been held at Liverpool on the body of a lady who had "prescribed" for herself a blue pill and black draught which she procured from a chemist. The bottle containing the draught was described by the medical witness as having contained laudanum. The verdict returned was that the deceased died from the effects of opium carelessly dispensed by Edward Pearson.

MICROCEPHALY.—Mr. R. T. Gore, F.A.S.L., reports in the *Anthropological Review* a case of microcephaly in a female who died at the age of forty-two. The length of the cerebrum after maceration in alcohol is 3·1 inches; the extreme breadth of each hemisphere two inches; length of posterior lobe from the apex to a well-marked fissure at its inner margin is 1·1 inch. The brain, carefully weighed when recent after the membranes and vessels were removed, was ten ounces five grains (avoirdupois).

L'UNION MEDICALE DE PARIS.—The medical press of France it appears is as much under the surveillance of the authorities as the political journals, judging from the fact that last week the above well-conducted journal received a *communiqué* for having stated that Paris is now ravaged with cholera and typhoid fever. The Minister of the Interior might not have interfered in this matter, but for an attempt to make the Government responsible for the great mortality in Paris by ascribing it to the over-crowding in the poor quarters—the over-crowding to the high rents—and the high rents to demolitions.

LIQUID PERMANGANATE OF POTASH. — M. Leconte prepares this solution in the following manner:—Caustic potash, six drachms; chlorate of potash, five drachms; binoxide of manganese, five drachms. Dissolve the caustic potash and the chlorate in a small quantity of water, and add the manganese; get rid of the water by evaporation, stirring constantly, and calcine the dry mass to a dark red for an hour in an untinned iron cup; allow to cool, and add a quart of plain water. Then boil for five minutes in a china capsule, and you will obtain a fluid of a slightly purplish tint; decant the solution, and wash the residue with such a quantity of water as to make altogether two quarts. When filtering is thought necessary, the liquid should be passed, not through paper, but through very fine sand. For dressing foul wounds, or for injecting, use one drachm of this solution to from three drachms to five of spring water.

OPIUM.—The probable out-turn of opium for the year 1864 is estimated by the *Scindian* at 27,000 chests of Patna, and 20,000 chests of Benares. The result may be depended upon, from the fact that "the whole of the drug has now been gathered, and is in course of manufacture into cakes." Notwithstanding the depressed state of the market for this drug in China, prices are maintained, but may be "expected to fall towards the end of the year," consequent upon the increased quantity that will be brought forward in 1864. Our contemporary is of opinion that "it is quite beyond the bounds of probability that the drug should in any case fall so low as 1200 rupees, the average fixed by Sir Charles Trevelyan in his budget for 1863-64."

BDELLATOMY.—It is well known that the blood escapes a pretty long time from a leech when the extreme end of the animal is cut across. M. Beer, of Berlin, has been in the habit of performing this little operation to obtain much blood. But to ensure success the section should be made as near as possible to the foot, carefully avoiding the twenty-fourth and the twenty-ninth ring, where the genital organs are situated. Nor must the wound be too near the anal orifice. The leech, when these precautions are attended to, continues to take blood for a long time. This method is rather different from another, which consists of carefully emptying the leech after it has fallen off, and keeping it for further use. As to the quantity of blood which it is desirable to abstract, it should not be forgotten that leech-bites yield blood, in some cases for hours, if humoured with warm water or a poultice.

PETROLEUM.—The medical officers of health of Liverpool, after inquiring into the effect which the nauseous smell of petroleum exercises on the health, has reported that it has not an injurious effect. The children particularly who live in the petroleum quarters are especially healthy and good-looking. It would be satisfactory to know how far the comparative health of the petroleum districts is to be accounted for. The mere statement of the fact is not conclusive on this point. Collateral evidence is necessary to determine the value of such an opinion. It is essential, to arrive at a just conclusion on this matter, that the wages, the habits, and the general condition of the persons employed in the petroleum trade should be known.

LIMEWASHING AT TORQUAY.—The Local Government Board at Torquay are supplying materials and the use of implements for limewashing to any poor person applying for them, thus greatly promoting the sanitary state of the town, and at the same time relieving themselves of the heavy expense of continuous sickness. This plan of preventing the spread of disease has long been followed in the metropolis. Torquay is not entitled to any especial commendation for doing that which it ought to have done long ago. Torquay boasts of being pre-eminently a healthful locality, but it cannot safely neglect the employment of those sanitary precautions which less healthy localities have long since adopted.

ENGLISH HOSPITAL FOR NATIVES AT PEKIN.—Dr. Lockhart, F.R.C.S., says that on his first attending patients at Pekin, only two or three presented themselves. The number, however, so rapidly increased, that during the fourteen months and a half that the hospital and dispensary had been opened, no less than 22,144 individual cases had been received. There is no more striking fact in the history of civilization than the exercise of the influence of medical practitioners over the feelings and prejudices of those under their care in semi-civilized communities. The Chinese Medical Mission has done more to reconcile the Chinese to the British influence than our successful armies and our most accomplished diplomatists. Amongst the most prominent of pioneers of civilization in the Celestial Empire are to be numbered the medical missionaries, and of these Dr. Lockhart and Dr. Hobson are deserving of especial mention. The bare fact that twenty-two thousand of the inhabitants of China have applied for medical relief to the dispensary at Pekin, is a welcome and striking illustration of the confidence which the Chinese place in the all but unrewarded services of our self-denying, laborious, and benevolent brethren.

URETHROTOMY.—It would appear that the rising generation of surgeons in France have pretty often recourse to this operation. M. Dolbeau, a hospital surgeon, stated the other day at the Surgical Society of Paris that he uses urethrotomy as a means of promoting dilatation in exceptional cases. External urethrotomy is only practised in cases of impermeable stricture, and the urethra is then cut *without* the use of a staff. M. Dolbeau cuts whenever he can from behind forwards, and

uses the olive-shaped urethrotome. He divides the stricture only, avoids the sound textures, and thinks that, with certain patients, it is advisable to cut the narrowed part at several sittings, using ordinary dilatation between the operations. When urgent cases present themselves the cutting should be from before backwards to overcome the obstacle. The section is then completed by cutting from behind forwards. Urethrotomy should always be followed by a long and careful course of dilatation, until the canal has recovered its normal dimensions and pliability. The author had formerly trusted *exclusively* to internal urethrotomy, but has given up that practice. Since 1858 he has performed thirty-six operations of this kind, of which twenty-five were followed by complete success. The members of the Society, especially M. Morel Lavallée, thought this mode of dealing with stricture was rather summary, and contended that dilatation had in many cases in their hands been quite sufficient to obtain a complete and permanent cure.

SUMMER ASSIZES, CROYDON, AUGUST 15: BECK V. FARRY.—This was an action to recover the sum of £95 15*s.* for alleged professional attendance by the plaintiff, a physician, upon the defendant and his family.

Mr. Serjeant Shee and Mr. Joseph Sharpe were for the plaintiff; Mr. Serjeant Petersdorff and Mr. Francis for the defendant.

It appears that the plaintiff practises as a surgeon and physician in Langham-place, London, and the defendant is a surveyor of highways, living at Stratford, some seven or eight miles from the plaintiff's residence. The particulars of the plaintiff's claim extended from February, 1859, to July in the same year, and included charges at the rate of three or four guineas each for twenty-six visits.

The plaintiff was called, and swore that he was called in to attend in the first instance a daughter of the defendant, for which he charged three guineas each visit, and afterwards three other children, for which his charge was four guineas.

The defence was that the plaintiff had been introduced to defendant by a Mr. Sterne, an intimate friend of both parties, who lived close to defendant, and that he had gone merely for the purpose of seeing the children of defendant as a friend, and not in a medical capacity, and that he had always said he was acting gratuitously until some difference arose between himself and Sterne, which defendant was called upon to decide as arbitrator.

Verdict for plaintiff for full amount.

THE MONEY VALUE OF A REDUCED DEATH-RATE is shown in startling figures in Dr. Gairdner's work on Public Health. He assumes that there has been an average of 3750 lives saved annually by the sanitary improvements of the town of Liverpool. Basing the calculation of the value of a productive human life on the tables of Dr. Farr, he estimates that an annual saving of £617,500 has been effected, which, at twenty-five years' purchase, amounts to £15,437,500; deducting £1,059,387 for public and private works, there remains a nett gain to the community of £14,378,113. Without inquiring minutely into the astounding figures which are adduced, there can be no doubt that sanitary regulations in such a town as Liverpool must have a decided influence on the value of human life. As these regulations not only mainly originated with, but have been carried out by members of the medical profession, the public cannot fail to appreciate the services which practitioners of medicine confer upon them, not only in the treatment, but in the prevention of disease.

WESTERN CIRCUIT: WELLS, AUGUST 11TH.—Mary Gregory was indicted for the wilful murder of her male infant child at Taunton, St. James's, on the 24th May, 1863.

The evidence proved that the prisoner gave birth to a child on the 11th of May, near Taunton; that on Whitsunday (May 24th) she went to Taunton with the child, and returned home without it; that the body of a child was taken from the river Tone, tied up in a bag or a pocket, to which a brick was fastened, and that this pocket had been cut from a dress belonging to the prisoner. She had also, on several occasions, made use of expressions such as "I have done it, I have done it myself! I have had a baby and destroyed it."

Mr. Cornish, F.R.C.S., of Taunton, who made a post-mortem examination, said—He thought that the child was three or four weeks old, that it had died of asphyxia; could not say whether it had died before or after being thrown into the water. Did not think that the appearance of the dura mater showed that death was caused by convulsions. Should not expect to find the lungs of a person drowned extended or enlarged. Was of opinion that water might penetrate the lungs of a corpse thrown into the water after death to a very small extent, but thought it was not sufficiently certain that it would do so. In asphyxia the right cavities of the heart are generally found to contain blood, the left being empty. Had experience in puerperal mania. It may come on at any time, usually three or four days after birth. When mania supervenes, peculiar forms of insanity arise, leading to destruction of life. There may be unnatural joy or depression of spirits. This state may last for a few hours or for some days; in such cases the killing of a child may be the effect of a sudden impulse, with the full knowledge of the illegality and wickedness of the act. Asphyxia might be caused by overlying. Could not say, in the present instance, if the death was caused by drowning.

The jury returned a verdict of "Not guilty," from the inconclusive nature of the medical evidence adduced before them: evidence, however, which was quite consistent with physiological facts.

HEALTH OF LONDON DURING THE WEEK ENDING SATURDAY, AUGUST 15TH.—The deaths in London which rose to 1514 in the last week of July, fell to 1402 in the first week of the present month, and again to 1320 in the week that ended last Saturday. Forty-five fatal cases of small-pox were returned, which differs little from the weekly average number since the end of May. There were 118 deaths from scarlatina, and 22 from diphtheria. Diarrhœa and English cholera were fatal in 209 cases, of which 190 occurred to children.

SATURDAY, AUGUST 8TH.—The deaths in London, which were 1514 in the last week of July, declined to 1402 last week. The deaths from small-pox in the last three weeks were successively 34, 43, and 49. Of these 49 cases, 13 are stated to have occurred to persons on whom vaccination had been performed. Scarlatina was fatal in 115 cases, and diphtheria in 15. The most fatal of all the epidemics was diarrhœa, which always predominates at this season, and which last week caused 184 deaths. There were 15 deaths from cholera, chiefly amongst infants.

MEDICAL VACANCIES.

Birmingham and Midland Free Hospital for Sick Children—Acting Physician and Acting Surgeon.
Chester General Infirmary—House-Surgeon.
Leeds Fever Hospital—Resident Medical Officer.
Manchester Royal Infirmary and Dispensary—Physician's Assistant and Junior House-Surgeon.
Sheffield Public Hospital and Dispensary—Assistant House-Surgeon.

MEDICAL APPOINTMENTS.

J. BRAYTON, M.R.C.S.E., has been appointed Medical Officer to the Workhouse of the Whitehaven Union, Cumberland, vice John Irwin, M.R.C.S.E., deceased.

A. CAMPBELL, L.F.P. & S. Glas., has been appointed Medical Officer for the united Parishes of Kilchrenan and Dalavich, Argyllshire, vice J. Lindsay, deceased.

A. P. CARTER, M.R.C.S.E., of Gloucester, has been appointed Deputy Superintendent-Registrar of Births, Marriages, and Deaths.

A. H. CHURCHILL, M.R.C.S.E., has been appointed House-Surgeon to the Wallasey Dispensary, Birkenhead, Cheshire, vice T. W. Smith, M.D., resigned.

J. CLARKE, M.R.C.S.E., has been elected Medical Officer and Public Vaccinator for the Ballieborough Dispensary District of the Ballieborough Union, Co. Cavan, vice J. A. Johnston, L.K.Q.C.P.I., deceased.

C. H. CLARIDGE, M.R.C.S.E., has been appointed Medical Officer for the Fulham-town District of the Fulham Union, vice W. C. Dempsey, M.R.C.S. Eng., resigned.

T. COLLINS, M.R.C.S.E., has been elected Governor of the Apothecaries' Hall, Ireland, for 1863-64.

H. COOPER, M.R.C.S.E., has been elected Resident Surgeon to the Reading Medical Dispensary, vice H. C. March, M.R.C.S.E., resigned.

E. DIVER, M.D., has been appointed Medical Officer for the Heckfield District of the Hartley-Wintney Union, Hants, vice N. Crisp, M.R.C.S.E., resigned.

S. P. ENGLEHEART, L.R.C.P.Ed., has been appointed Medical Officer and Public Vaccinator for District No. 2 of the Bromley Union, Kent.

G. FERGUSON, M.B., has been appointed Surgeon to the Royal General Dispensary, Bartholomew-close, vice F. W. Skey, M.R.C.S.E., deceased.

S. FELCE, L.R.C.P.Ed., has been appointed Medical Officer for District No. 2 of the Launceston Union, Cornwall, vice H. Pethick, M.D., resigned.

P. D. HANDYSIDE, M.D., has been elected Lecturer on Anatomy at Surgeons' Hall, Edinburgh, vice J. Struthers, M.D.

C. F. HARDING, M.D., has been appointed Medical Officer for the West Woolwich District of the Greenwich Union, vice W. W. Harding, M.R.C.S.E., deceased.

R. HARVEY, M.D., has been elected Resident Surgeon-Accoucheur to the Birmingham General Dispensary, vice J. L. Earle, M.D., who will resign at Michaelmas.

C. HIRST, L.R.C.P.Ed., has been appointed Medical Officer for the West Ardsley District of the Wakefield Union, Yorkshire, vice W. Ellis, L.F.P. & S. Glasgow.

J. E. MACDONALD, L.R.C.S.I., has been elected Medical Officer and Public Vaccinator for the Tuosist Dispensary District of the Kenmare Union, Co. Kerry, vice G. M. Mayberry, M.D., resigned, on being appointed to the Kenmare Dispensary District of that Union.

R. H. MEADE, F.R.C.S.E., has been elected President of the Bradford Medico-Chirurgical Society for 1863-64.

J. H. MERRYWEATHER, M.R.C.S.E., has been appointed Medical Officer for the Guisborough District and the Workhouse of the Guisborough Union, Yorkshire, vice T. Bird, L.S.A., deceased.

R. C. MOON has been appointed House-Surgeon to the Surrey Ophthalmic Hospital, St. George's-circus.

T. W. MOURITZ, M.D., has been elected Medical Officer and Public Vaccinator for the Crossroads Dispensary District of the Dunfanaghy Union, Co. Donegal, vice A. Hillyard, M.D.

R. MULOCK, M.D., has been elected Deputy Governor of the Apothecaries' Hall, Ireland, for 1863-64.

W. B. MUSSET, M.B., has been elected Physician to the Royal General Dispensary, Bartholomew-close.

J. NORTH has been appointed Dispensing Pupil to the Hants County Hospital, Winchester.

M. O'CONNOR, L.K.Q.C.P.I., has been appointed Medical Officer for District No. 5 of the North Witchford Union, Cambridgeshire, vice J. H. Wright, M.R.C.S.E., resigned.

G. OWEN, M.R.C.S.E., has been appointed Medical Officer for the Learnorin District of the Machynlleth Union, Montgomeryshire, vice W. Owen, M.R.C.S.E., deceased.

C. J. RENSHAW, M.D., has been appointed Medical Officer for the Ashton-on-Mersey District of the Altrincham Union, Cheshire, vice A. W. Close, F.R.C.S.E., deceased.

J. ROBERTS, L.R.C.P.L., has been elected Resident Medical Officer to the Bath Mineral Water Hospital, vice H. H. Parry, M.R.C.S.E., resigned.

J. C. G. ROBERTSON, L.S.C.P.Ed., has been appointed Assistant Medical Officer in the Female Department of the Middlesex County Lunatic Asylum, Hanwell, vice Ellis, transferred to the Male side.

J. N. VINEN, M.D., has been elected District Registrar of Births &c. for St. John's, Southwark.

J. WALKER, M.D., has been elected Dental Surgeon to the Westminster Hospital, vice J. C. Clendon, M.R.C.S.E., resigned.

D. YELLOWLEES, M.D., has been appointed Medical Superintendent to the Glamorganshire County Lunatic Asylum, Bridgend.

MILITARY AND NAVAL MEDICAL APPOINTMENTS.

F. C. ANNESLEY, M.R.C.S.E., Surg.-Major Royal Engineers, has been promoted to Deputy Inspector-General of Hospitals, vice Hadaway, promoted.

P. F. BELLEW, Assist.-Surg. Bengal Service, has been ordered to officiate as Civil Assist.-Surg. of Rajshahye.

J. BERRY, M.D., Surg. Madras Service, has been appointed to the 14th Native Infantry.

E. W. COLEMAN, M.D., Assist.-Surg. R.N. Aug. 1st, 1861, has been appointed to the "Snipe."

J. COLLINS, Staff Assist.-Surg. attached to the 13th Foot, Bengal, has been directed to take medical charge of a Detachment of the 19th Foot at Phillour.

G. DENNEHAY, Hon. Assist.-Surg. Madras Service, doing duty in the Inspector-General's Department Northern Division, has been appointed to the medical charge of the Officers and Men employed upon the Kistnah Anicut, Beswarrah.

C. T. EVES, Assist.-Surg. Madras Establishment, 2nd Infantry Hydrabad Contingent, has been ordered to officiate in medical charge of the 1st Cavalry Hydrabad Contingent during the absence of Assist.-Surg. Sanderson, or until further orders.

J. FAIRWEATHER, M.D., Assist.-Surg. 4th Punjaub Cavalry, has been directed to afford medical aid to the 2nd Punjaub Infantry, vice C. P. Costello, transferred to the 6th Punjaub Infantry.

E. A. FITZGERALD, Assist.-Surgeon 1st Bengal Native Infantry, has been directed to assume medical charge of the 34th Bengal Native Infantry and 15th Bengal Cavalry at Jhansi.

T. W. FOX, M.B., Staff-Surg. Army, has been appointed Surgeon to the Royal Engineers, vice Annesley, promoted on the Staff.

H. E. FOX, M.D., Bengal Service, has been ordered to officiate as Medical Officer of Purneah.

M. B. GALLWEY, M.R.C.S.E., Staff Surg.-Major, has been directed to assume medical charge of the 90th Foot, Meerut.

R. GRIEVE, M.D., Assist.-Surg. R.N. June 6th, 1861, has been appointed to the "Warrior."

S. M. HADAWAY, L.R.C.S.Ed., Deputy Inspector-General of Hospitals Army, has been promoted to Inspector-General of Hospitals, vice J. R. Taylor, C.B., retired upon half-pay.

ST. JOHN STANLEY, M.R.C.S.E., Staff Assist.-Surg. Army, has been appointed Assist.-Surg to the 3rd Dragoon Guards, vice Catton, deceased.

T. S. VEALE, Assist.-Surg. Bengal Service, has been appointed to the medical charge of the 4th Punjaub Infantry, and to afford medical aid also to the 6th Punjaub Infantry, as a temporary arrangement.

Births, Marriages, and Deaths.

BIRTHS.

On the 2nd inst., at Woodhill-terrace, Cork, the wife of Dr. Starkey, of a son.
On the 2nd inst., at Northumberland-street, Newcastle-on-Tyne, the wife of J. S. Pearse, M.D., of a daughter.
On the 3rd inst., at Wentworth, Yorkshire, the wife of Wm. Clarke, M.D., of a daughter.
On the 4th inst., at Warwick, the wife of J. Tibbits, M.D., of a son.
On the 5th inst., at Louth, Lincolnshire, the wife of A. Dymock, M.D., of a daughter.
On the 5th inst., at Wimpole-street, Cavendish-square, the wife of Charles Murchison, M.D., of a daughter.
On the 6th inst., at Kildare-street, Dublin, the wife of G. H. Porter, M.B., of a son.
On the 7th inst., the wife of J. W. Ogle, M.D., of Upper Brook-street, Grosvenor-square, of a son.
On the 7th inst., at Finsbury-square, the wife of Dr. Satro, of a son.
On the 8th inst., at Porchester-terrace, Hyde-park, the wife of M. T. Kays, M.D., of a son.
On the 9th inst., at Weyhill, the wife of T. Pike, M.D., of a son.
On the 9th inst., at Market-Drayton, the wife of Dr. W. W. Saxton, of a son.
On the 9th inst., at St. Martin's, Stamford, Lincolnshire, the wife of O. B. Shore, M.D., of a son.
On the 10th inst., at Holywood, Co. Down, the wife of A. Dunlop, M.D., of a son.
On the 11th inst., at Loraine-road, Holloway, the wife of Thos. Nelson, M.D., Staff Surgeon R.N., of a son.
On the 11th inst., at Stratford-green, Essex, the wife of J. F. Nicholson, F.R.C.S.E., of a son.
On the 13th inst., at Wimpole-street, Cavendish-square, the wife of F. E. Anstie, M.D., of a son.
On the 15th inst., at Blenheim Villa, Blackheath-park, the wife of Francis Wilson, M.D., of a daughter.
On the 18th inst., at Catterick, Yorkshire, the wife of J. W. Caley, M.R.C.S.E., of a daughter.
On the 18th inst., at Wragby, Lincolnshire, the wife of John Deane Baker, M.R.C.S.E., of a son.

MARRIAGES.

On the 5th inst., at St. John's Church, Upperthong, Huddersfield, W. H. Broadbent, M.D., of Upper Seymour-street, to Eliza, daughter of the late J. Harpin, Esq., of Holmfirth.
On the 12th inst., at Manchester, G. E. C. Gumpert, M.D., to Louisa, widow of the late Joseph Eller, Esq., both of Manchester.
On the 13th inst., at St. Pancras, Dr. A. C. Hopton, of Cannock, Staffordshire, to Harriet, daughter of H. Speedy, Esq., of London and Edmonton.
On the 13th inst., at Clay-cross, Wm. John Wilson, Esq., Physician, of Clay-cross, to Adeline, daughter of Charles Binns, Esq., and granddaughter of Sir Joshua Walmsley, of Wolverton-park, Hants.

DEATHS.

On the 3rd inst., at Chester, Thos. H. Hughes, M.D., House-Surgeon to the Chester Infirmary, aged 25.
On the 6th inst., at Brighton, J. W. Holm, M.R.C.S.E., aged 49.
On the 8th inst., at Lee, Kent, F. Sheppee, of Bedford, formerly Physician-General H.E.I.Co.'s Service, aged 70.
On the 8th inst., at Kenilworth, Warwickshire, G. Ayton, M.R.C.S.E., aged 41.
On the 8th inst., at Homend, Cradley, Malvern, W. Jauncey, L.R.C.S.Ed., formerly of Birmingham, aged 29.
On the 9th inst., E. White, Surgeon, of Lamb's Conduit-street, aged 73.
On the 9th inst., J. B. Bickerdike, M.R.C.S.E., of York.
On the 10th inst., at Kinross, J. Gall, L.R.C.S.Ed.
On the 11th inst., Edwin Merton Packer, Student of the London Hospital, youngest son of the Rev. R. W. Packer, Rector of Woodton, Norfolk, aged 23.
On the 11th inst., at The Elms, Finglas, Co. Dublin, L. A. Renehan, L.R.C.S.I.
On the 12th inst., at Chester, G. Cumming, M.D., aged 81.
On the 14th inst., at Ramsgate, H. E. Hadwen, M.R.C.S.E., Surgeon-Major Madras Army.
At Lower Ormond-quay, Dublin, Thomas Sinton, M.D.
J. O'Brien, L.R.C.S.I., of Scariff, Co. Clare.

Medical Diary of the Week.

MONDAY, Aug. 24 .....
- ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM.—Operations, 1½ P.M.
- METROPOLITAN FREE HOSPITAL. — Operations, 2 P.M.

TUESDAY, Aug. 25.....
- GUY'S HOSPITAL.—Operations, 1½ P.M.
- WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEDNESDAY, Aug. 26
- MIDDLESEX HOSPITAL.—Operations, 1 P.M.
- ST. MARY'S HOSPITAL.—Operations, 1 P.M.
- UNIVERSITY COLLEGE HOSPITAL. — Operations 2 P.M.
- LONDON HOSPITAL.—Operations, 2 P.M.

THURSDAY, Aug. 27 ...
- ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
- CENTRAL LONDON OPHTHALMIC HOSPITAL — Operations, 1 P.M.
- GREAT NORTHERN HOSPITAL, KING'S CROSS.—Operations, 2 P.M.
- LONDON SURGICAL HOME.—Operations, 2 P.M.
- WEST LONDON HOSPITAL.—Operations, 2 P.M.
- ROYAL ORTHOPÆDIC HOSPITAL. — Operations, 2 P.M.

FRIDAY, Aug. 28.....
- WESTMINSTER OPHTHALMIC HOSPITAL. — Operations, 1½ P.M.

SATURDAY, Aug. 29 ...
- ST. THOMAS'S HOSPITAL.—Operations, 1 P.M.
- LOCK HOSPITAL, Dean-street, Soho.—Clinical Demonstrations and Operations, 1 P.M.
- ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
- KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
- ROYAL FREE HOSPITAL.—Operations, 1½ P.M.
- CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

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To Correspondents.

A Constant Subscriber.—It is in accordance with strict etiquette for a physician in consultation with a surgeon in general practice to append the initials of the latter to a prescription as well as his own. The order of precedence of these signatures is a matter of taste on the part of the physician. There is no settled rule of guidance.

A Traveller.—Water-cresses, scurvy-grass, onions, potatoes, but especially oranges, lemons, and limes are all good anticorbutics. Fresh vegetable matter of any kind should be eaten whenever possible to be obtained.

W. W., (Brompton.)—In proper cases the "remedy" in question is useful. We know nothing of the person respecting whom inquiry is made.

Staff Surgeon, (Belize, Honduras.)—There is no fixed sum. Much depends on the nature of the inquiry, and the amount of trouble to which the medical examiner is put.

Omega.—In the present state of medical law there is no remedy for the evil.

THE STUDY OF CHOLERA BY MILITARY SURGEONS.

To the Editor of THE LANCET.

SIR,—In the interest of humanity, and in the interest of medical science, I addressed you various communications relative to cholera, and in the interest of both I am grateful these have found a place in your influential journal; and out of respect for you I will answer your appeal, although the tone of that appeal commanded my silence.

I will place before you—1st, in what state I found the medical profession as to their knowledge of the pathology and medical treatment of cholera on my return to this country in 1848, after an absence of thirty years; 2ndly, I will place before you the proofs of what I have done to advance the knowledge of the pathology and of the medical treatment of cholera; 3rdly, I will place before you the reasons I have for stating that the army medical officers have never studied scientifically the pathology of cholera, that they know nothing of the pathology of cholera, and that their medical treatment assists the disease to destroy life; and 4thly, I will place before you the proofs that I have done all in my power, before calling the attention of the authorities to the subject, to satisfy Dr. Gibson that it was his duty to see that his department made themselves acquainted with this disease, and that they should remember that they had to deal with animate, and not with inanimate matter, and that I forwarded to him copies of my letters to the authorities.

As to the 1st question. When cholera first attracted attention in India in 1817, the Indian Government directed Mr. James Jameson to study the pathology, the etiology, and the medical treatment of cholera, and to report. He made his report in 1820, and stated that this disease was of sudden invasion, attacking persons in perfect health suddenly, "with vomiting and purging of a pale watery fluid, without taste or smell, spasms, &c., and destroying life in a few hours." Mr. William Scot was next directed by the Indian Government to study and to report on this disease. Mr. Scot published his report in 1824, and he says that Mr. Jameson's statement of the pathognomonic symptoms of this disease "was perfect, and left nothing to be desired; that cholera was a disease of sudden invasion; that it had no premonitory symptom; that diarrhœa and cholera were two distinct diseases; that where diarrhœa was remarked to be present before an attack of cholera, that the diarrhœa acted only by weakening the patient, and by making him more liable to be acted on by the cholera poison." He also agreed with Mr. Jameson that calomel in large doses, with opium, were the best remedies. When I returned to England in 1848, I found that no one had remarked that the symptoms, as laid down by Mr. Jameson, were contrary to nature, and overlooked a previous and an essential symptom. Every person in perfect health has fecal matter in his bowels, and it requires a strong diarrhœa to carry off this fecal matter, so as to produce evacuations "of a pale watery fluid, without taste or smell." Therefore Mr. Jameson's description of the symptoms of the disease applies to the last stage of the disease. He overlooked the first, the essential stage of the disease, that of diarrhœa. When a painless diarrhœa has too often drained away almost the whole serum from the blood, when the blood has ceased to circulate, when the heart has ceased to contract, when too often the person has passed all human aid, yet this person is at his usual occupation, or walking about for pleasure or for business, or he is at the festive board, the life of his party, unaware that he has anything serious the matter with him; then, at a moment least expected by himself or the friends about him, he is suddenly attacked with "vomiting," &c., and he ceases to breathe in a few hours. Hence cases of cholera, without a premonitory diarrhœa, with those unacquainted with the pathology of the disease. It was useless to point out this train of symptoms to the General Board of Health, who were then in charge of a provided relief against this epidemic. The opinions of Messrs. Jameson and Scot were paramount with them.

As to the 2nd question. I have seen and studied the disease in 1806, under the name of "*miséréré*, in Canada; I have seen and studied it during the Peninsular war, under the name of "diarrhœa;" I have seen and studied it in Paris from 1832—yearly about 18th August—up to 1836, under the name of "trousse galand;" and I saw and studied it in Paris in 1851, where it carried off 23,000 persons in about ten weeks. What I did to propagate the true pathology of this disease is known to the medical profession and the authorities there. When cholera broke out here in 1849, I was offered and accepted the appointment of Medical Inspector to the General Board of Health; I was appointed to superintend nine unions, and I had about 100 medical gentlemen acting with me. Their attention was directed to the inquiry as to the existence of a premonitory diarrhœa in cholera. 3902 cases of cholera occurred in these nine unions. Every one of these had a premonitory diarrhœa for a few hours, or for a few days, or for a few weeks; and it was further ascertained that when this premonitory diarrhœa was promptly cured, the developed stage, that of cholera, was prevented, and life was safe. The results of these researches are reported in the Cholera Report, published in 1850; but no deductions are drawn from these by the General Board of Health. And there was another important pathological fact ascertained by the above researches, which did not attract the notice of the General Board of Health, although brought before them: that when diarrhœa is epidemic, then it is dangerous to administer one-half, or one-third, or one-fourth of the usual dose of a purgative medicine, lest diarrhœa, too often followed by fatal cholera, be induced. In 1853, cholera again broke out in London. Finding that cases of sudden death from cholera were reported to the Registrar-General, I waited on him, and offered, if he would direct his sub-registrars to inquire and to report when they had to register a death from cholera if the person had had or not a diarrhœa previous to the attack of cholera, where cases were reported of death from cholera without any premonitory diarrhœa,—I offered, I repeat, to see the medical gentleman and family of the person, and to ascertain the facts, and to report to him. During the outbreak of cholera in 1853, 578 persons died of cholera, according to the Registrar-General's Report; 857 of these had had a premonitory diarrhœa, and 21 were reported to have had no premonitory diarrhœa. I inquired into these 21 cases. 18 were found to have had diarrhœa for a longer or shorter time previous to the attack of cholera; the 19th was a case of death from an overdose of medicine; the 20th was a case of gout; and the 21st, which was reported to be a case of "malignant cholera, without purging," was ascertained in the presence of the gentleman who had attended the patient, and who had made the above report, to be a case of strangulated hernia! Therefore, every person who had died of cholera in 1853 in London had had a previous diarrhœa. In the Registrar-General's Weekly Report of the 24th September, 1853, a letter of mine was published, pointing out that diarrhœa for a few hours, or a few days, or a few weeks, invariably preceded an attack of cholera, and that the disease in the stage of diarrhœa is easily cured, and the developed stage, that of cholera, prevented, and life is safe. This was the first time these pathological facts were made known in any country. They attracted the attention of the Imperial Academy of Medicine of France, and Dr. Müller, one of the most distinguished pathologists, was sent here by the Academy to see me, to inquire into my researches, and to report. Therefore, these important pathological facts were ascertained by the above researches, and then published for the benefit of medical science—1st, that a diarrhœa for a few hours, or a few days, or a few weeks, invariably precedes an attack of cholera; 2ndly, that if this diarrhœa is cured, the developed stage is prevented, and life is safe; and 3rdly, that when diarrhœa is epidemic, then it is dangerous to administer one-half, or one-third, or one-fourth of the usual dose of a purgative medicine, lest diarrhœa be induced, followed too often by hopeless cholera.

As to the 3rd question. You are aware that the medical reports from all the medical officers in charge of military hospitals in every part of the globe are filed at the Army Medical Department, and that they are open to the inspection of the medical profession. Having seen and examined these, and finding that the Army Medical Department had never scientifically studied the pathology of cholera, that they knew nothing of the pathology of cholera, and that their medical treatment of this disease was contraindicated by the pathology of the disease, and assisted the disease to destroy life, I waited on Dr. Gibson to point out this to him, and to ask him to direct his department to study this disease. He replied that his department was well acquainted with the pathology and medical treatment of this disease, and that no further study of this disease was required, or would take place. After the intelligence had arrived here two years ago, that above 3000 men had been carried off in India by cholera in a few weeks, and after having ascertained that Dr. Gibson had done nothing to make his department study this disease, and that the same deplorable medical practice was carried on that had been going on in the army since 1817, I again waited on him, again to press on him the necessity to make his department study this disease, especially as there was a report that cholera had broken out amongst the troops at Ceylon. But I found him determined to do nothing. I then informed him that I should place the subject before the authorities, and that I should send him copies of my letters.

And 4thly. I did refer the question to the authorities, and I did send Dr. Gibson a copy of my letter; and I received from the authorities for answer, "that it had been ascertained that the Army Medical Department were perfectly well acquainted with the pathology and medical treatment of cholera, and that no further study of the disease was required." At the time cholera broke out two years ago in India, a Commission was appointed to study the pathology, the etiology, and the medical treatment of cholera, and to report. A copy of this Report fell into my hands some weeks ago, and I there saw that this Commission decided that they were incompetent to study the pathological questions; but that they would study the hygienic questions connected with the disease in general. And this Commission, all through their Report, deplore that the pathology of the disease has never been scientifically studied in India; and they add, on the authority of Dr. Mountjoy, that if the patients were left to the efforts of nature, they would have a better chance to save their lives than by the medical treatment they received. I again waited on Dr. Gibson, and I called his attention to the above Report, which he had not seen, and I pressed him to have this disease studied scientifically by his department; but I found him as determined not to do so as ever. I again informed him that I should refer the question to the authorities, and that I should send him a copy of my letter; but this time suggesting that a Commission, composed of medical gentlemen acquainted with medical science, should examine and report on this question at issue between Dr. Gibson and myself. I did appeal to the authorities, and I did forward Dr. Gibson a copy of my letter to the authorities, and the question is now before the War Office whether a Commission shall be appointed or not; and as the War Office is bound to provide and to see that the soldier receives the best food, so the War Office is bound to provide and to see that the soldier receives the best medical advice. I cannot anticipate that the War office will refuse inquiry. I deeply regret that Dr. Gibson has forced me to bring this question before the authorities and before the public. But I have nothing to reproach myself with. I have discharged a duty.

In conclusion—1st, I have placed before you in what state I found the medical profession as to their knowledge of the pathology and medical treatment of cholera on my return here in 1848, after an absence of thirty years; 2ndly, I have placed before you the proofs of what I have done to advance the knowledge of the pathology and of the medical treatment of this disease; 3rdly, I have placed before you the reasons I have for stating that the army medical officers have never studied the pathology of cholera scientifically, that they know nothing of the pathology of cholera, and that their medical treatment assisted the disease to destroy life; and 4thly, I have placed before you the proofs that I have done all in my power, before calling the attention of the authorities, to satisfy Dr. Gibson that it was his duty to see that his department made themselves acquainted with this disease, and that they should remember that they had to deal with animate, and not with inanimate matter, and that I fulfilled my promise to forward him copies of my letters to the authorities.

Finally, Mr. Editor, I regret that I have been obliged to enter into all the above details, which has made this letter longer than is usual to claim a place in your journal; but you requested me to explain myself relative to the charge brought against the Army Medical Department, and out of respect to you I have explained myself in answer to your appeal, although, I repeat, the tone of that appeal commanded my silence.

I remain, Mr. Editor, yours most obliged,

Bruton-street, Berkeley-squ. D. MACLOUGHLIN, M.D.,
August, 1863. Member of the Legion of Honour.

A Country Surgeon.—The 5th section of the Medical Witnesses Act limits prohibition of fees to evidence given by medical officers of institutions in which patients have died. In the case mentioned by our correspondent, the patient did not die *in* any institution, nor was he attended by the medical officer of the infirmary. The house-surgeon is therefore clearly entitled to payment.

Adams Defence Fund.—We have received the following sums from Dr. Gill, Bow-road:—Messrs. Cooper, Bow-road, 10*s.* 6*d.*; Messrs. Gaiman, Bow-road, £1 1*s.*

L.F.P.S.G. (South Shields) will oblige us by sending a report of the trial to which his communication refers.

Tyro.—Such works are not to be recommended.

COMMUNICATIONS from Dr. Rose, Dr. Shettle, Dr. Wallace, Dr. S. M. Bradley, Dr. Donald C. Black, Mr. Matthews, and a Staff Surgeon, are in type, but unavoidably postponed.

Mr. W. Walker.—The colonies generally are well supplied with medical practitioners. The climate of Sydney is good.

THE CASE OF CANCEROUS TUMOUR AT TUNBRIDGE WELLS.

To the Editor of THE LANCET.

SIR,—I hope you will allow me an opportunity of replying to the attack made on me in your journal of the 8th instant, which I should have noticed sooner had I not observed that Mr. Trustram was to have published another letter this week. In the following remarks I shall endeavour to be as concise as possible, as Dr. Wardell has fully corroborated most of my statements, and has left little for me to add; yet I consider it is due to the profession, as well as to myself, that I should refute in the strongest manner the unjust accusation which has been brought against me.

Notwithstanding the serious charge made by Mr. Solly in the following words—"Dr. Bell's account of my proposal to operate is simply and entirely untrue,"—I beg to say that there is not one word of my report of the case of the late Mr. Condell that can be disproved, however violently it may be denied. It is objected to me that I have not particularized the patient sufficiently by stating his profession, &c. I avoided doing so from no such sinister motive as that which has been implied, but from a becoming regard to the feelings of the relations, and because I understood it was the earnest desire of one of his oldest friends. I could not designate Mr. Solly as such, as I was not aware of the fact; but even if he were so, it would not have justified him in acting as he did, in obviously attempting to supersede me as Mr. Condell's physician, and substituting an old pupil of his own, particularly as the patient was desirous that I should attend him, and had made me promise that I should, after his death, superintend an inspection of his body, in order to ascertain if his idea of his case were correct. I mentioned this fact to Mr. Solly; and had it not been for this promise, and the deep interest I felt in the kind-hearted and excellent man, I should have immediately given up my attendance on discovering the total disregard that was shown to humanity and medical etiquette in his treatment. It may be said that this statement is at variance with Mr. Hicks's letter; but I must be excused if circumstances, on which I shall not enter at present, induce me not to put much value on that communication, more especially when I compare it with his observations the last time I saw him, when he said I had been "very ill used; Mr. Solly had acted wrong, and that he never would have given his consent to the operation." And when I consider the still more gratifying letter I received from the poor widow, who seldom left the sick room, and knew all that I did. She "thanks me for my great kindness and attention to her dear husband," adding that she "quite appreciated my anxiety on his behalf," and that she felt "truly grateful for all that was done."

It would occupy too much space to analyze all Mr. Solly's sophistical arguments. I shall therefore confine myself to a very few additional remarks, proceeding, in the first place, to ask for what purpose were Dr. Wardell and Mr. Trustram called in by Mr. Solly on the 11th May if it were not to overrule my opinion, which I had strongly expressed against the operation? And why was Mr. Solly so anxious to obtain an instrument if the operation were not to be performed that day? That his anxiety on this point was very great, was shown by the fact that Mr. Andrew, like a terrestrial Mercury, was sent from place to place in search of one, proclaiming as he went that Mr. Solly had come down from London, and "*he says an operation must be performed immediately.* It is the only thing to save his (Mr. Condell's) life." In passing, I may remark that this fact tallies but indifferently with the letter of this gentleman, which is quoted by Mr. Solly. But if the operation was fraught with so much benefit in this case, why should it be denied that it had been proposed? And having denied that he had suggested it, with what consistency does Mr. Solly say that "on taking a retrospective glance at the whole course of the symptoms, it appears to me matter of regret that my original opinion was overruled"? And how did he come to say to Mr. Fergusson, who disapproved of the operation, "I bow to your decision" if he had never proposed to operate? He states that in consequence of a relapse, he received another summons "to come down immediately," and that "on his arrival, Dr. Bell was absent, as he did not expect me by so early a train." The fact is, I did not expect him at all, as I saw no necessity for his coming. I was aware that Mr. Trustram had telegraphed to him to inform him that Mr. Hicks was to call on him at three o'clock. The object of this visit was to arrange with him whether Dr. Ferguson or Dr. Barrows should be requested to see Mr. Condell. But in place of seeing Mr. Hicks, he started at once for this place, leaving that gentleman to wait for hours in the hope of seeing him. By some strange accident he met Mr. Trustram, and they immediately went to Mr. Condell's, and harassed the poor man by passing several bougies up the rectum, which, I was informed by Mr. Hicks afterwards, gave him great pain; and well they might, as the largest instrument was contorted and soiled with slime and cancerous matter, showing that the surface of the tumour had been torn. I was sitting in the dining-room when they came down, with their sleeves turned up, which led me to suspect that they had been performing some operation, although Mr. Solly did not mention what it was; but I afterwards found it out from Mr. Trustram, which induced me to decline meeting Mr. Solly in consultation next morning.

Having fully shown the groundlessness of the accusation brought against me by Mr. Solly, I should willingly have concluded this letter; but I must claim your indulgence a little longer, in order briefly to notice Mr. Trustram's letter, which has obviously been written for the purpose of bolstering up his old teacher, with a total disregard to the facts of the case. Really in this respect the master has great reason to be proud of his pupil, as he seems to have been a most apt scholar. I fear, however, the "*best of provincial surgeons*" (!) has a very erroneous idea of what constitutes "every possible consideration and professional courtesy" to a fellow-practitioner when he supposes that visiting and operating on his patient in his absence, and without his consent, can be so designated. He states that he was ignorant of the reason for Mr. Solly requesting his opinion on the 11th. This is very remarkable, after Mr. Andrew, with great acumen, informed him that evening that "*the colon was not sufficiently distended to admit or justify an operation.*" The paltry attempt which Mr. Trustram makes to imply that Mr. Condell was dissatisfied with my attendance requires no particular notice, as it is entirely at variance with the facts I have already stated. I may remark, however, that his statement that I allowed myself to be indebted to a person with respect to whom I was silently penning so "unfounded and, inferentially, so malicious an attack," is totally incorrect, as he was fully aware that I was taking notes of the case, and I had warned him to be on his guard as to what he did, for I should report everything. As to his performing the autopsy, I have to say I regretted it exceedingly, as I wished it to have been done by Dr. Wardell, whose great experience in the performance of pathological investigations would have secured its being done in a scientific and satisfactory manner. The idea that because he had been called in three times in consultation constitutes the patient his, is something new; and if it becomes generally known, he is not likely to have many opportunities of adopting the appropriation.

I beg now to conclude, and to apologize for occupying so much of your space by what contains so much personal matter; but I consider that it refers to a practice which, if unchecked, will seriously injure the influence and respectability of the profession.

I am, Sir, your obedient servant,

Tunbridge Wells, Aug. 15th, 1863. C. BELL, M.D., F.R.C.P.E.

Ruabon.—At a recent meeting of the Royal Society of Tasmania a quantity of "pitcherry" was produced. The plant had been bruised and broken up, so that no very definite idea of its botanical character could be arrived at. It is narcotic in its effect.

PROFESSIONAL ADVERTISING.

A CORRESPONDENT calls our attention to a "card" circulated by a new-comer in a country district. It is certainly anything but creditable to him. He states that he is "a L.S.A. London, Surgeon and Accoucheur, late Student of the Westminster Hospital, London, and second Prizeman of that institution, 1862; one of the best Senior Wranglers (third-year's man) in Surgery, 1863; highly commended in Clinical Surgery, and received approbation in Clinical Medicine."

Mr. E. B. Carter, (Stroud.)—For the present we shall not be able to find room for the papers proposed.

F. R. C. C.—True leprosy has recently been stated to rage in Brazil to a degree probably equal to that in which it existed in Europe in the middle ages.

THE LARYNGOSCOPE.

To the Editor of THE LANCET.

SIR,—You will, perhaps, permit me to say, in reply to a communication from Messrs. Weiss and Son in your impression of last week, that in my article on the Laryngoscope I lay no claim whatever to being the originator of the head-band and forehead-plate, and that my description relates especially to the position of the ball-and-socket joint at the centre of the back of the mirror, the advantages of which are that the mirror is always equi-balanced, and can be adjusted with the greatest accuracy. I was aware that this joint had been applied to the laryngoscope in other situations; but I have yet to learn that it has been fixed in the position alluded to. If an exactly similar instrument were in Prof. Czermak's case at the Exhibition, it seems to have escaped general observation; and seeing that the Professor advocated the central aperture in the reflector, it appears rather inconsistent that the joint should be so placed as to interrupt most effectually the field of vision.

The mechanical advantages of a ball-and-socket joint are obvious; and with regard to the portability of the respective instruments, a glance will suffice to determine whether this is a point worthy of consideration.

I am, Sir, your obedient servant,

August, 1863. FRANCIS MASON, F.R.C.S.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Grally Hewitt; Mr. Gamgee, Edinburgh Mr. Gamble, Leominster, (with enclosure;) Mr. Bradley, Manchester; Mr. Furnivall, (with enclosure;) Mr. Donald, Paisley; Mr. Blatchley; Mr. Chandler, (with enclosure;) Mr. Steele; Mr. Tucker, South Molton; Mr. Summers, Chatham; Mr. Hutchinson, Camborne; Dr. Wallace; Dr. Marsh, Nottingham; Mr. Harris, Burslem, (with enclosure;) Dr. C. Bell, Tunbridge Wells; Mr. M'Nab, (with enclosure;) Dr. Trimmer, Gamlingay, (with enclosure;) Mr. Griffiths; Mr. R. B. Carter, Stroud; Mr. Smedley, Matlock; Mr. J. Crerar, St. Heliers; Rev. A. J. D. D'Orsey; Mr. Moore; Dr. Barrows; Mr. Thurgar; Mr. Parsons; Mr. Hepworth, Rocklands; Mr. Barnett, Meopham; Mr. R. Smith, (with enclosure;) Mr. Ward, Bolsover; Mr. Brown, Barton, (with enclosure;) Mr. Ingham, Belize; Mr. Bliss, (with enclosure;) Mr. Chapman, (with enclosure;) Mr. Ashburner, (with enclosure;) Mr. Booth, Clay Cross; Mr. Grubb; Mr. Weston, Wellington, (with enclosure;) Mr. Sutton, Timberland, (with enclosure;) Dr. Edwards, Cardiff, (with enclosure;) Mr. Clarke, Huddersfield; Dr. Gibson; Dr. Robertson, Edinburgh; Mr. R. Leary, Bilston, (with enclosure;) Dr. Mackintosh, Glasgow; Mr. E. Keys, (with enclosure;) Dr. Shettle, Cann; Dr. W. Jones; Mr. Nanney, Stanhope; Mr. Tessier; Mr. Fletcher, Liverpool; Mr. F. Mason; Mr. Johnson, (with enclosure;) Mr. Charteris, (with enclosure;) Dr. Hitchman; Dr. Abbotts Smith; Mr. Birtwhistle; Mr. Tuson; Mr. Corner; Mr. W. Matthews; Mr. Hyde; Dr. Crean, Stoke, (with enclosure;) Dr. Beaumont, Sheffield; Dr. Pratt, Appledon; Mr. Caley, Catterick; Mr. Macnamara, Dublin; Mr. Walker, Whittlesey; Dr. Gill, (with enclosure;) Dr. Berncastle, Sydney; Mr. Lander, Sydney; Dr. Shaw, Windsor, N.S.W.; Mr. H. Gill, Leicester; Mr. J. Humphreys; Mr. F. Hall, Leeds; Dr. Wrangham, Wragby, (with enclosure;) Dr. Barder, Bristol; Mr. Garraway, Faversham; Dr. Barron; Mr. Callender; Mr. Foster; Dr. May, Newcastle; Mr. Freeman; Mr. Scott, Whitchurch; Mr. Woodcock; Nemo Mortalium; X.; Enquirer; A Parish Doctor; P. Q., (with enclosure;) M.D. Edin.; Tyro; A. B., (with enclosure;) M.R.C.S.; A Staff Surgeon; &c.

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"Sackville-street, Piccadilly, London, April, 1862."

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